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THAYETMYO DISTRICT

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THAYETMYO DISTRICT

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THAYETMYO DISTRICT

VOLUME A

CHAPTER I.

PHYSICAL DESCRIPTION.

BOUNDARIES. GENERAL DESCRIPTION. MOUNTAINS—Arakan Yoma; Nakôn *kwin*; Pegu Yoma. RIVERS—Irrawaddy; Matôn and its affluents; Made; Bwetgyi; Kyini. GEOLOGY. BOTANY. FAUNA. CLIMATE—Temperature; Rainfall.

The district of Thayetmyo lies between 18°-52′ and 19°-59′ North and 94°-24′ and 95°-52′ East; it falls on either side of the Irrawaddy and is the most northerly district of Lower Burma along the course of that river. It forms a part of the Magwe Division of Burma, the rest of which division lies in Upper Burma. It is bounded on the north by the Minbu and Magwe districts, on the south by Prome, on the west by Sandoway and Kyaukpyu, and on the east by Yamèthin and Toungoo. North and south the boundaries are to some extent artificial, but east and west natural boundaries are provided by the two great ranges of the Pegu and Arakan Yomas. Previous to the war of 1885-86 the northern portion of the district was Burmese territory and the boundary followed a line as nearly as possible east and west from a point six statute miles north of the flagstaff at Myedè. The boundary was demarcated by Major Allan, from whom Allanmyo derives its name, and boundary pillars were erected at intervals along its course. The stone tablet from one of these pillars, with an inscription in Burmese and English, is preserved in the office of the Deputy Commissioner. The district now includes a large area north of this old boundary. The total area of the district is now 4,750 square miles. Bou-dari[es]

The southern boundary leaves the Irrawaddy six miles above Prome at Yathaya, and marching with the Prome

district for 31 miles proceeds across low hills in a generally western direction to a point just north of the Thimbawgyi-taung on the ridge of the Yoma. At this point the boundary turns northward, leaving the Prome district boundary and running with that of Sandoway. For a total distance (in a direct line) of 60 miles the boundary now follows, in a north-westerly direction, the main crest of the Arakan Yoma. For 36 miles of this distance the district of Sandoway lies to the west, and for the remainder that of Kyaukpyu. At the northern corner, the boundary turns east, while the Yoma range becomes the boundary between Kyaukpyu and Minbu. The boundary of Thayetmyo now runs with that of Minbu till it rejoins the Irrawaddy. The line crosses the Matôn river and a lofty spur of the Yoma till it reaches the valley of the Pani river, after following which for three miles it passes with a general trend to east-north-east over a distance of 38 miles to meet the Irrawaddy. Shortly after leaving the Pani river the line joins a cart-road which it accompanies for 18 miles. The last eight miles before the river is reached follow the course of the Tazat *chaung*, which debouches at Nyaungbintha, 3½ miles north-west of Minhla. The boundary then turns to the south-east and follows the Irrawaddy channel for 24 miles, throughout which distance the district of Thayetmyo is faced by that of Magwe. At a point four miles north of Sinbaungwè, the line crosses to the east bank and thence follows several low ridges in an easterly direction till the main ridge of the Pegu Yoma is reached. The boundary now turns to the south and follows the Pegu Yoma main ridge for 36 miles; for the first 12 miles of this distance the district of Thayetmyo is adjoined by that of Yamèthin and after that by Toungoo. From the point where the Thayetmyo, Toungoo and Prome districts meet the boundary proceeds westward for 22 miles, at first along a spur of the range and then along a cart-road; thence it follows another ridge for 30 miles to the south-west and finally descends by the Zalôn *chaung* to join the Irrawaddy at Zalôn village, 3½ miles north of Yathaya, where the southern boundary leaves the western bank.

ERAL CRIP- r.

In general appearance the district resembles Upper Burma rather than other parts of Lower Burma. The rainfall is so low as to bring the district within the "dry zone," and the country is so broken up with hills that only in a few places is plain land suitable for extensive paddy cultivation found. For the rest, the district consists mostly of hills, many of which are so gravelly and barren that they are useless even for *taungya* cultivation. Some idea of the

wildness of the country may be derived from the following figures:—The area of the district is 4,750 square miles; of this the Forest Department claims 574 square miles as Reserve and no less than 2,888 square miles as "unclassed" forest. Thus three-quarters of the entire area of the district is almost entirely incapable of supporting any population.

The Irrawaddy flows down the centre of the district from north to south, and with its tributaries drains the whole. The Yoma ranges, which bound the district on either side, form the watersheds that divide the Irrawaddy basin from the rivers of Arakan on the west and the basin of the Sittang on the east. The interior of the western part of the district contains a series of low ranges running north and south, parallel with the Yoma and with the Irrawaddy. Thus, between Thayetmyo and Mindôn four low ranges have to be crossed.

Mou TAINS: Arak Yom

The highest points of the district occur in the Arakan Yoma (Burmese, *anaukbet-yoma*), a range which is the continuation southward of that great eastern spur of the Himalayas that runs past Assam and Eastern Bengal and divides India from Indo-China. This great mountain barrier, which further north is the haunt of wild tribes and is almost unexplored, is even here very difficult to surmount, though not rising above four or five thousand feet in elevation. Colonel Horace Browne in his "Account" of the district written in 1873 describes four passes from the district into Sandoway. Of these the path from Yinwa on the Matôn stream to Letpan on the Ma-e river was recently reported to be the only one used, and that but rarely. This pass is also the only one marked in the map of the Survey of India. There is another road leading to Arakan from the northern part of the district (which in Colonel Browne's time belonged to independent Burma); this track leaves Nyaungnwè on the Pani stream, seven miles west of Myothit, and goes through Auktabuwa to Hmeinsein, a Chin village in Minbu district, whence it crosses the Yoma to An, in Kyaukpyu district. This, the "An Pass," is now the principal through route from the district; even this track, however, is but little used. A few persons come over to Thayetmyo in the cold weather hawking dry fish about the villages, and it is supposed that some opium smuggling is done by this road; but the passes are impracticable in the rains and at no time passable to any but foot passengers.

The most notable peaks are the Myinkadè-taung, Pezawa-taung and Kyidaung. The last named is not of remarkable altitude, but was the furthest point to which Major Allan

was able to penetrate in demarcating the frontier in 1853.* A few miles north of Kyidaung and 11 miles due west of Taingda rises the highest peak of the district, Pezawa-taung (5,108 ft.); the slopes of this mountain bear the only tea grown in the district. On the Thayetmyo-Kyaukpyu border, eight miles south of the junction of the Thayetmyo, Kyaukpyu and Minbu districts, stands the peak known to the Burmese as Myinkadè and to the people of Arakan as Myinmatein (never disappearing). It rises in one solitary cone from the main Yoma, which it completely blocks, to a height of 4,884 feet, but owing to its isolated position it gives the impression of much greater height. There is a splendid view from the summit of the mountain, especially to the west, on which side no hill approaches it in height within 2,000 feet. On a clear day the sea between the island of Ramree and the mainland is visible. To the south-west rises Panbotaung, which though only 15 miles away can only be reached by a two days' journey. So inaccessible is this mountain that it was for years the haunt of a band of outlaws, proclaimed offenders and other fugitives from justice, and their *taungya* cuttings were clearly visible from the summit of Myinkadè. In 1906 their fields were discovered and the paddy burnt, whereupon all but four surrendered.

The various peaks of this range are for the most part connected by a sharp ridge with numerous spurs. Being open to the Bay of Bengal, these mountains are exposed to the full fury of the monsoon and thus the streams that rise in them are very turbulent and uncertain, while they intercept the rain which is often sorely needed in the rest of the district. The slopes are covered with dense evergreen forests and thickets of bamboo growing to a height of 50 feet or more. Here and there, however, open spaces covered with grass are met with on the spurs. These are spoken of as *kwins*.

akôn *win.*

In April 1904, the Deputy Commissioner, Mr. Fraser, while touring on these western Yomas encamped one night at such a spot, the Nakôn *kwin*. He found the place so agreeable and cool that he recommended the erection of a bungalow there to serve as a Sanatorium for the district. His proposal was sanctioned, and the building was completed

* Major Allan's remarks are quoted in Colonel Browne's "Account" on page 7. The mountains mentioned in that work as the highest points are now known to be far lower than many peaks further west in the region then unexplored. The twin peaks of Shwedaung, though not 4,000 feet in elevation, are a conspicuous feature of the landscape as seen from the Matôn valley.

in 1908. Considerable difficulty was experienced by the contractors in collecting the materials for the bungalow as only cooly transport was available, there being no sort of road which could be used either for wheel vehicles or for pack animals. The Forest Department in 1908 opened up a route which makes it possible to reach the place without incurring much fatigue, but the gradients are still too steep to permit of riding. The bungalow occupies a commanding position on a rise in one of the spurs off the main ridge, with the wooded slopes of the great range behind and in front an expanse of lower country stretching towards Mindôn. The Mindôn stream at Yinwa is clearly seen, and on a clear still day a glimpse of the Irrawaddy near Kama is obtainable. On either side are wooded spurs, dotted with the curious open *kwins* and the haunt of bison, sambhur, *gyi* and wild hog. Little streams of deliciously cool clear water run down the valleys to join the main stream of the Mindôn *chaung*.

The approach to the Nakôn *kwin* can only be negotiated in the dry season. Leaving Mindôn, Yinwa, a village 12 miles up the Matôn stream, is the first objective. Along this stage the stream has to be crossed repeatedly, and though several of these crossings may be avoided by pushing over the hilly country to the north-west of Mindôn the path is bad and difficult even for Burmese ponies. In the rains the stream becomes a torrent and is quite unfordable much of the time. From Yinwa the path leads up the Yinwa *chaung* till the edge of the Reserved Forest is reached, and from this point the ascent begins. This is about three miles from Yinwa. The Taga *chaung* now gives the general direction of the route, which ascends the hills on the north, reaching in two miles the top of the main spur on which the bungalow is situated. Some of the gradients are extremely stiff and in places steps have had to be made. From the top of this climb the path passes to the west along the spur for two miles, traversing many a bamboo clump and skirting denser forest patches. When the bungalow is finally reached the traveller is well repaid for his exertions, but the difficulty of the journey undoubtedly detracts from the usefulness of the bungalow, especially for those who wish to bring ladies.

The Pegu Yoma stands on the eastern boundary of the Peg
district, separating the basin of the Irrawaddy from that of Yon
the Sittang. It nowhere attains the height of the Arakan range, and in this district its highest points are the peaks known as Binhon-taung on the border between Thayetmyo and Toungoo, none of which reach a greater elevation than

2,003 feet. The loftier slopes on the range are included in the large East Yoma reserve, which extends down the southernmost thirty miles of the district boundary with a width ranging from one to six miles. The range, besides being lower than the western Yoma, is more easily crossed, there being routes by which carts can pass from this district both to the Toungoo district and to Pyinmana. Of the tracts leading into Toungoo one passes Thadutkôn, due east of Tindaw, one (mentioned by Colonel Browne as the principal route and used by the Chief Commissioner on tour in 1880) starts from Thetkebyin on the Chaunggaunggyi stream: but the main route now lies further north, starting from Kayinmasan, and this is the only way by which carts can go. The range is much lower here than further south, and becomes almost indistinguishable from those lower ranges that are a characteristic feature of the whole district. Being in the kingdom of Upper Burma, however, the easy northern route was not available before the annexation. Still, even further south, the higher regions of this eastern portion of the district are fairly level and the descent to the Irrawaddy is more gradual and less broken than on the west side.

RIVERS. Irrawaddy.

The Irrawaddy river traverses the district for a distance of 90 miles (measured along the western bank). In width the river varies from three furlongs at a point between Kama and Prome to three miles opposite Sinbaungwè. At Thayetmyo the width is 1¾ miles. In the dry weather, of course, large shoals and sandbanks appear, especially in the broader reaches, and these are occupied for open season cultivation by the inhabitants of the riverine villages. From time to time disputes arise between different villages as to these islands in consequence of their shifting from year to year, while the steamer channel often passes from one side to another of some of the islands. Even with the more permanent islands anomalies of jurisdiction are created by alterations in the course of the river. For instance, the island opposite Thayetmyo is separated from that town by the main channel, though still belonging to it. The "Nyaungbinzeik" island, at the mouth of the Matôn *chaung*, was only transferred from the Myedè subdivision to Kama township in 1905, though the main stream had cut it off from the Myedè bank from before British times. The following story is told to explain this, quoted from Mr. Wallace's Settlement Report:—"In the year 1783, when Bodaw-paya, or Min-taya-gyi as he is generally called, was king of Burma, an expedition was undertaken for the conquest of Arakan, and the army having been successful,

returned with a highly-prized and colossal image of Gautama Buddha, which was towed up the Irrawaddy to Ava, and was taken through the channel on the west of the island, so that it has ever since been considered the main stream, although it is now practically closed up." In the dry weather, besides islands, there are also large extents of sandbank between the permanent bank and the water at Kama and at Sinbaungwè. At all other important landing places the banks are at present steep and high, and steamers can come alongside at any season of the year. Owing to the height of the permanent banks recurrent floods are escaped. The highest recorded rise of the river was on August 11th, 1877, and is marked on a river gauge in Cantonments between the Deputy Commissioner's house and the Fort. On this occasion the riverside roads must have been a few feet under water. When the river is at its lowest before the rises in April due to the melting of the snows, navigation is very difficult and only the elaborate system of buoys maintained by the Flotilla Company renders it possible. But in 1908, though the river was lower than it had been for twenty years, the steamers nowhere found less than 4'-6" of water between Thayetmyo and Prome.

The principal tributaries of the Irrawaddy in this district are the Pani, Matôn and Made streams on the west and the Kyini and Bwetgyi streams on the east.

Mat
strea

The Matôn, or Mindôn, *chaung* is the largest of these. It is passable for small boats any time of the year and in the rains large boats can ascend the river, though owing to the rapidity of the current it takes as much as ten days to reach Mindôn. Owing to the innumerable twists and turns of this river's course, it is not practicable to sail up-stream and boats are generally towed a considerable part of the way. The descent from Mindôn to Kama may be done in two days. This is the principal trade route to Mindôn, for traders find it easier to take their goods straight up from Prome by boat than to go to the trouble and expense of transferring them to carts at Thayetmyo for the forty miles' road journey from Thayetmyo to Mindôn. Moreover, when the Pani river is in flood, the Mindôn road is often impassable for several days. The Mindôn *chaung* rises in the Arakan Yoma on the slopes of Kyauksiyo-taung in the Minbu district, nine miles to the north of the boundary, and after entering the district of Thayetmyo runs in a southerly direction for about 35 miles, almost parallel to the western boundary but slightly diverging from it. Here it turns eastward for about eight miles to a point just above Mindôn,

where it is joined by the Mu stream. From Mindôn it proceeds in a south-easterly direction to the point where it debouches on the Irrawaddy a few miles north of Kama. The distance between Mindôn and Kama in a direct line is some 40 miles, but so numerous are the bends in the river's course that the distance by water is 74 miles. At one point, where the townships of Mindôn, Kama and Thayetmyo meet (Singaw), the river runs for nearly seven miles between points that are in a direct line barely a mile apart.

The voyage down this stream from Mindôn is very picturesque, and a particular feature of interest which it offers in the dry weather is the Matôn waterwheel. This device is described in the article on Irrigation, Chapter IV. The valley of the Matôn river is very fertile, but the shifting nature of the channel presents a difficulty in village administration. In one place, for example, the river is eating away the high bank from year to year, much to the annoyance of the residents on that bank, who see their own land cut away while their neighbours across the water get a corresponding increase of alluvial land.

Pani. Ten miles above the mouth of the Matôn stream it is joined by the Pani. This stream also rises in the Minbu district; its source lies two miles to the east of that of the Matôn. The course of the Pani lies to east-south-east as far as Myothit, after which it flows towards the south as far as Kyaukkyi, on the Thayetmyo-Mindôn road. From here it flows eastward for five miles to Bangôn, where it makes a great loop and turns south again, joining the Matôn *chaung* after nine miles more. The Pani is not used for boat traffic, but water flows in it nearly all the year.

Other tributaries of the Matôn stream are the Mu, which runs between the Pani and Matôn valleys, joining the latter stream near Mindôn, and the Hlwa, which rises on the Yoma and, unlike other members of this group of streams, flows in an easterly rather than a southerly direction.

Made. At the south of the district the Made flows from the mountains almost due west of Kama and joins the Irrawaddy at Kama. Only in the rains is it navigable and that only for a few miles above Kama. Its course is in a direct line about forty miles.

Bwetgyi. The principal stream on the Myedè side is the Bwetgyi stream. This is the name which it bears where it flows into the Irrawaddy, but higher up in its course it is known as the Chaunggaung-ngè and the Chaunggaung-gyi stream. It rises in the Pegu Yomas at the foot of the Binhon mountains and flows in a westerly direction for 45 miles

At Myohla it is joined by the Padè, a large stream which drains the south-east corner of the subdivision. This Bwetgyi or Chaunggaung stream is the only timber-floating stream on the Myedè side. Near its mouth it cuts the Prome road, for which owing to muddy foundations no permanent bridge has been built.

Kyini.

The Kyini *chaung* lies to the north of the Bwetgyi, like which it runs down from the hills with a westerly direction. It issues between Allanmyo and the old site of Myedè town. It runs almost dry in the hot season and is not of much use to the Forest Department.

GEOLOGY

The district as it then was, before the addition of the northern parts, was visited by Mr. Theobald of the Geological Survey of India in 1869 and a lengthy account of the geological features of the district by that officer is printed in Colonel Horace Browne's "Account," pages 17 to 24. If details are required, reference to that work and to the reports of the Survey (accessible in the "Reprint of Geological Papers on Burma, 1882") is recommended. For the purpose of this compilation the following summary should suffice.

On the east and west the district is bounded respectively by the Arakan and Pegu ranges, the rocks comprising the latter being the older of the two geologically; while much of the intervening ground is occupied by rocks of more recent age than either. The Arakan range at the (old) frontier consists of a group of argillaceous and siliceous beds of very varied mineral character. The argillaceous portion of the group constitutes the main axis of the range. The side ranges east of the main range exhibit the same features for some miles, after which a group of siliceous beds comes in; a little further east the variety of beds is very remarkable, sandstone and shale occurring in regular layers, with loose blocks of limestone scattered about. These are the "axial" beds (now bearing the name of "Chin Shales" and ascribed to the Upper Cretaceous or the Tertiary age). The age of these beds it is difficult to determine owing to the scarcity of fossils. The breadth of the group averages about 12 miles. To the eastward of these "axials" comes in a belt of rocks, shales, sandstones and limestones, of eocene age, varying in breadth from 16 miles at the old frontier to over 50 miles in the south of the district, where they extend from the Yoma to the Irrawaddy. The thickness of this nummulitic group is remarkable, being nearly 4,000 feet. It is in this group that the coal near Thayetmyo is situated. East of this group the whole

country to the Pegu range consists of newer classes supposed to be of miocene age, save a somewhat irregular area near the river occupied by a still newer group. The large miocene group contains a great variety of rocks, largely shales and sandstones; but differs from the older western group in the extreme rarity of the occurrence of limestone. The newer group is divided into an upper sand and a lower series of thin bedded silty clay, and is interesting as providing the fossil wood which is so common about Thayetmyo. The sand is also characterized by the occurrence of a concretionary peroxide of iron. This ore is further dealt with in the chapter on "Minerals."

[Bo]tany. No special feature of interest is offered by the flora of the district, which is characteristic of the dry zone, plants which do not require much moisture, such as cactus, being most common. Most of the wild vegetation, however, consists of bamboo or of low jungle, with forests of freer growth in the higher places. Forests and forest trees are discussed in Chapter V.

[Fa]una. Throughout the district the barking deer (*gyi*) abounds. On the plains near Pyalo, and in the comparatively open undulating country behind Sinbaungwè, the brow-antlered stag (*thamin*) is common. Apart from these animals and leopards, only small game is commonly found in the lower portion of the district, such as hare, partridge, quail, junglefowl and varieties of waterfowl. On the slopes of the Yomas, on either side, elephants, rhinoceros, bison, tigers, bears, wild pig and sambhar are also found. Peafowl are scarce, but silver pheasants are very plentiful in the mountains. Elephants, owing to State protection, are numerous and daring, and have taken to visiting the plains even as far as the Irrawaddy, ruining the crops and occasionally killing a man. Their ravages on crops cause thousands of rupees' worth of damage every year.

Most varieties of snake known to Burma occur in the district, including such deadly varieties as the hamadryad, the cobra and the Russell's viper; and many cattle die of snakebite. Human deaths from this cause are happily not frequent; and some have already been averted by the use of the Lauder-Brunton lancets, which have been distributed among headmen.

[Cl]imate [and ra]infall. The district belongs to the "dry zone" of Upper Burma and consequently has a more variable temperature and a far smaller rainfall than those districts that lie southward along the course of the Irrawaddy. The lowest rainfall is in the north, where the average for the ten years ending in

1903 was 31 inches: in the same period the average rainfall at Thayetmyo itself was 37 inches, and at Mindôn, at the foot of the hills, 49 inches. Rain between December and March is uncommon; a little rain falls in April and November usually, but the wettest period is from May to October. No one month of these is conspicuously wetter than another on the average, though from year to year there is considerable variation; thus in 1905 there were 5.92 inches in June and 9.02 inches in July recorded at Thayetmyo, while in the following year the position was reversed, June showing 10.08 inches and July 5.07. The heaviest fall recorded in any one month was 12.20 inches, which fell in September 1905. The wettest of recent years was 1905 with 42 inches, while in 1907 there were only 27 inches.

Temperature. The temperature shows considerable variations, probably owing to the absence of moisture in the atmosphere. On cold-weather nights the thermometer has fallen as low as 42°, and in the hot season rises to 107° sometimes; but the average maximum and minimum range in December is from 60° to 85°; in April, the hottest month, from 75° to 104°; and in July, after the rains are well set in, from 77° to 89°. Thus in the cold weather there is a range of about 25°, and in the hot season one of nearly 30°, whereas in the rains the range is only 12°, giving a much more equable temperature. High as the temperature rises in April, the heat is rendered tolerable by the dryness of the atmosphere and the prevalence of a breeze blowing up the river. But at this time of the year the whole country-side is parched with the heat, owing to the long absence of rain, and not a blade of green grass can be seen. Here, as in other dry regions, the first heavy shower of May makes a wonderful change in the scenery, hill and plain being turned from a dusty brown to vivid green almost in a night.

CHAPTER II.

HISTORY AND ARCHÆOLOGY.

HISTORY.—In Burmese times; The First British Expedition, 1825-26; The Second British Expedition, 1852; The Third War, 1885-86; Dacoity, 1886-88. ARCHÆOLOGY.—Pagodas at Thayetmyo; at Kama; other pagodas.

HISTORY. In Burmese times. The district of Thayetmyo does not figure with any prominence in the annals of Burma. The following account, a summary of that contained in Colonel Browne's book, embodies what little is known.

The first Burmese monarchy of Tagaung or old Pagan, which was destroyed by a Tartar invasion in the 6th century B.C., does not appear to have extended so far south, the middle Irrawaddy region being left in the hands of its aboriginal inhabitants, the Pyus. In the 5th century B.C., the Pyus were so harassed by invasion from Arakan that to win Burmese assistance their queen married a prince of the restored house of Tagaung and yielded her sovereignty to him. The son of this prince founded the city of Thare-Khettra, near Prome. After this time, the lower portion of the present Thayetmyo district belonged apparently to Thare-Khettra, and the upper portion, on the west bank of the Irrawaddy, to Thunaparanta (the modern Salin) and on the east bank to Tampadipa (now Pagan). On the destruction of the Prome dynasty, at the end of the first century of our era, the last king's nephew, named Thamôndarit, fled across the Irrawaddy and northwards to Mindôn. Here he stayed for a few years before crossing to Pagan and establishing a new kingdom.

Thamôndarit was the founder of a dynasty which endured for eleven centuries, and during all that time the district of Thayetmyo was a part of its territories. On the overthrow of the dynasty a son of the last king, called Minshinsaw, was appointed to be governor of Thayetmyo, where he and his successors became practically independent. The southern portion of the district meanwhile belonged to the independent rulers of Prome. From this time on, till the arrival of the British in Burma, the district hardly figures at all in the annals, though from time to time Myedè is mentioned as being a strong fort. Tradition says that this fort was founded about 100 B.C. by Thamôndarit and rebuilt thirteen centuries later. Burmese generals considered it so impregnable that as a rule they left it in the rear when passing up or down the river, without attempting to lay siege to it.

First ish pedi- 5-26.

The first British expedition to Burma, 1825, brought the invading army as far north as the adjoining district of Prome. In April 1825 Colonel Cotton, returning from an unsuccessful attempt to cross the Yoma to Toungoo, visited Myedè, which he found deserted. By August the Burmese were again established at Myedè, while the English were at Prome, and the village of Nyaungbinzeik, which is in the Thayetmyo district on the east river-bank, was the scene of a conference between British and Burmese commissaries in October 1825; but the Burmese delegates showing no real desire to come to terms,* the conference broke up and shortly afterwards the

* Colonel W. Laurie, "Our Burmese Wars," p. 51.

Burmese army marched right up to Prome. Maung Shwe Min and Maung Bo, two *thugyis* of *myos* in this district, inflicted a severe defeat on a sepoy army at Wettigan. But by December 1825 the Burmese armies had been repulsed, and the British advanced up the river with Ava as their objective; and this time again the fort of Myedè was found to be abandoned. A 12-inch cannon ball has been found a few miles south of Minhla, which is said to have been fired from a British battery on the eastern bank in this war.

The Second British Expedition, 185

In the war of 1852 the decisive conflict took place at Yathemyo, near Prome, and the southern part of Thayetmyo district was ceded to the British without further fighting. The frontier line was fixed six miles north of the flagstaff at Myedè. This portion of the district was then made into a subdivision of Prome and was constituted a district in 1870. In 1854 a cantonment was marked out, and since that time troops have always been stationed at Thayetmyo, Myedè, till its abandonment, being retained merely as an outpost.

The Thi British Expedition, 1885-86

It was only natural that Thayetmyo should be the base of operations for the war which resulted in the overthrow of King Thibaw and the independent kingdom of Upper Burma. The only collision of any importance occurred at Minhla, in the north of the district, a town which then belonged to Upper Burma and beside which stood a fort of substantial appearance. After a sharp action the fort was carried, the Burmese *Wun* of Minhla withdrawing in safety: and the Burmese position on the other side of the river was destroyed by dynamite.

Dacoity, 1886-88.

As is well known, the real difficulties of the last Burmese war only began after the king's government had been upset and the country formally annexed. Disbanded Burmese soldiers ranged over the country, waging a guerilla warfare on their conquerors, not by attacks on British armies but by wholesale plunder of their more peaceful fellow-countrymen. Thus several years of dacoit-hunting ensued on the annexation and nowhere was the evil worse than in the northern part of this district (the present Minhla township). The principal dacoit leader in these parts was the notorious Bo Swè, whose range of operations included the north of this district and also Minbu. Other leaders were Taukta of Myothit, who through enmity to Bo Swè took employ with the British as a head constable, but later became discontented and joined the rebels, Bo Swè's lieutenants, Pôngyi Bo and Byaing Bo, and Shwe Hlan, the *Myothugyi* of Mindat. The north-west portion of the district near Shandat and

Taingda suffered most severely from their ravages, and peaceable inhabitants were almost all driven elsewhere. Operations against the dacoits were conducted with vigour, but the difficulties of chasing an unseen foe in thick jungle were naturally great. To prevent ambuscades roads were pushed through the district. These were not more than cart-tracks, but all trees except those that gave shade were felled for a distance of fifty feet on either side of the road. These roads linked together Myothit, Yenanma, Linkè and Minhla, at all of which points sepoys were stationed. British troops were stationed at Monatkôn, between Thayetmyo and Linkè, and a civil officer at Linkè, while a temporary telegraph line from headquarters to Yenanma facilitated the direction of operations. The leader, Nga Swè, was killed in 1888; other men of less notoriety took his place for a time in the Minhla subdivision (Tun Aung, Tun E, Saw Pu), while in 1889 a gang under Buddha-raza came down from Magwe to the Myedè interior along the Pegu Yoma; peace was, however, restored throughout the district by 1892. Among the victims of the dacoit-hunting expeditions was Mr. Perreau, Superintendent of Police, who was shot while dining at Myothit by the hand, it is said, of the renegade Taukta.

ARCHÆOLOGY.

The district of Thayetmyo does not appear to have contained large or wealthy population at any period; indeed it would be strange if it had in view of the poor quality of the soil. There being therefore no great past to reflect, it is not surprising that the district can show but few erections of any historical or architectural interest, and there is not a single pagoda in the district which enjoys anything more than a local reputation.

Pagodas: at Thayetmyo.

The principal pagodas in the Thayetmyo township are the Shwe-thet-hlut (just south of the circuit-house), the Shwe-moktaw (below the town, at the south of Ledaingzin village) and the Shwe-andaw or Swèdaw (ten miles to the north-west of the town, near Yebwet village, Kunôn circle). The Shwe-thet-hlut pagoda is the most noted of these. Unlike others in the district it is hollow. It was erected in 1373 A.D. by King Swa-Sawkè, the second of the Ava dynasty. As a child he was captured at Thayetmyo by the king of Arakan and he erected this pagoda as a thank-offering for the preservation of his life (the name "thet hlut" meaning "life spared"). The Swèdaw or Andaw pagoda contains a holy tooth from Ceylon which was deposited at this spot, under the direction of signs and portents, by a king of Pagan who was bringing the sacred relic home. The pagoda dates from the year 1167 A.D. The Shwe-

moktaw pagoda is one of a number of pagodas which are said to have been erected by King Asoka. Burmese legend extends his Indian empire to a universal dominion, whereby Burma received its share of the 84,000 relics of Buddha which he distributed over his dominions in token of his religious zeal. Over each of the relics a pagoda was built, and their completion was ordered for a certain fixed day when the moon should emerge from an eclipse. The name "Shwemoktaw" is derived from the Pâli word for this emergence of the moon. Thayetmyo district alone claims no less than ten of these pagodas. The Shwemoktaw of Thayetmyo is the most important, but there are others at Kama, old Myedè and Nyaungbinzeik, which may be mentioned.

At Kam

The pagodas of Kama cannot fail to attract the traveller's attention as he passes up the river; they form a very picturesque group. The most conspicuous of them stands in front of the town above the steep river bank, guarded by two imposing leogryphs (*chinthès*) some forty feet in height. This is the Sutaungbyidaw or "answerer of prayers," known also as the Shwemyindin or "conspicuous." It is reputed to be of great age, being one of a group of pagodas which King Nagraseinda* erected in the year 640 of the Buddhist era (about 100 A.D.) when he rested awhile at Kama on his northward flight, when expelled by the Arakanese from Prome. The pagoda is undoubtedly of great age, but recently when the elders asked for aid to meet the expense of repairing it the Archæological Department held it was not of more than local interest and not a proper object for State conservation. The other three pagodas erected at the same time are the Shwe-kayudauk, the Shwe-nanpaing and the Shwe-zigôn. In the town of Kama stands the Shwe-paung-daw pagoda, dating from 1085 A.D. and erected by King Alaungsichu, one of the great pagoda builders of Pagan, where he put up the noble Thapinyu temple. Another pagoda at Kama is the Paya-baw, about 800 years old.

Other Pagod

In the township of Allanmyo there are no pagodas of such interest as those of Kama and Thayetmyo. The oldest are the Shwe-mobôn and the Shwe-myedè on the site of the old Burmese fort of Myedè. They are memorials of the story of the foundation of Myedè which is told in Chapter XIV. The Myatheindan pagoda was built at Butlè, about 1167 A.D., to cover an emerald found in the creek there. Other pagodas of some local celebrity are the Shwemoktaw

* Uncle to King Thamôndarit, founder of Pagan.

already referred to, the Pato pagoda on a commanding hill above Pyalo, and the Sagudaung just below that village.

The rest of the district offers no objects of archæological interest except an old pagoda in Mindôn town called the Sutaungbyi and built by the same king as the Sutaungbyi of Kama.

CHAPTER III.

THE PEOPLE.

POPULATION.—Density; growth. RACES.—Burmans: general character; villages; houses; clothing; food; religion; Chins: religion; Other races.

OPULA-ION. ensity. The population of the district at the last census (1901) was 239,706 souls. This works out at 50 persons to the square mile. A greater density of population could not be expected in view of the sterile nature of a large part of the district.

rowth. It is difficult to compare the figures for the population as it is now and as it was before the annexation of Upper Burma, for till 1887 the northern parts of the district were not included. A fair idea may be obtained by subtracting the populations of Minhla and Sinbaungwè townships from the totals for the district in 1891 and 1901, but further allowance must still be made for the fact that some three hundred square miles of Thayetmyo and Mindôn townships were also added to the district after the annexation. As, however, this area consists mainly of uninhabited hill country with a few villages in the valleys, the calculation will not be put far wrong. We thus obtain the following results :—

Township.	Population by returns, 1855.	Population by returns, 1860.	Population by census, 1872.	Population by census, 1891.	Population by census, 1901.
Myedè (without Sinbaungwè).	15,611	20,084	63,061	76,563	66,672
Thayetmyo ...	6,452	12,899	35,633	41,651	37,599
Mindôn ...	9,056	14,993	26,165	35,010	30,350
Kama ...	11,363	14,379	31,957	41,383	39,570
Total for District ...	42,482	62,355	156,816	194,637	174,191

Allowing for the extra 300 square miles added by the annexation, it will be seen that there has been but little

increase in population between 1872 and 1891, while after that year a considerable decline is recorded. It would seem that the security and easy communications brought by British Government, together with the return of those who went into voluntary or involuntary exile before the advance of the invading armies, led to a rapid increase of population which was maintained until about 1870, but that by that time the limit of subsistence had been nearly reached. There is no prospect of a considerable increase in the near future, the natural surplus caused by the excess of the birth-rate over the death-rate being largely drawn off by emigration to Lower Burma, where there is never a shortage of work for agriculturists. The only parts that showed an increase and not a decrease between 1891 and 1901 were the regions most recently annexed, the townships of Minhla and Sinbaungwè. Even in Sinbaungwè the growth was not great, while the increase of 27 *per cent.* in Minhla is largely due to the return of inhabitants driven out by the bands of dacoits which harried the township after annexation.

The district is principally inhabited by Burmans, but there are also a fair number of Chins. Other races indigenous to Burma—Talaing, Karen, Shan—are practically unrepresented and there is no large settlement of natives of India except in the town of Thayetmyo itself. According to the figures of the 1901 census, there were in every thousand of the population 887 Burmans, 84 Chins, 17 natives of India, and 12 of all other races. RAC

Of the Burmese inhabitants of the district little need be said except that they possess all the characteristics that mark their race in other parts of the country. Colonel Browne, writing in 1870, expressed the opinion that the Burman "here, as elsewhere, displays much spasmodic energy and general laziness; much love of feasts and shows; much disregard of the sacredness of human life and much tenderness for the lives of inferior members of the animal kingdom; much arrogance and inconsiderateness when placed in high position, and, last though not least, much general truthfulness and, amongst unsophisticated villagers, the very unoriental trait of being quite unable to tell a specious falsehood: a trait as honourable to himself as it is convenient to those who have the government of his country." The above remarks might have been written to-day with the reservation that intercourse with the law courts has to a certain extent worn away the trait of awkward candour among the town dwellers, though the villager is still an unapt pupil for the unscrupulous concocter of cases. Bur Gen char

Mr. W. V. Wallace, the officer who conducted the settlement operations in 1900-01, was not favourably impressed by the Burmese inhabitants of the district, and he writes that "they have none of the marked sturdiness of the lazy but muscular Burman of Pegu," and that "they are not in any way superior to their Chin neighbours, not even in the matter of cleanliness." But this is an individual view and is dissented from in the Lieutenant-Governor's resolution on Mr. Wallace's report.

ages. Villages in the district are as a rule small: even in fertile spots where there is a fairly large population within a small area, it is common to find a number of small villages close together rather than one large one. In other parts villages are often widely scattered; this is especially the case in the western Yoma, where there is only room for a tiny hamlet in a large area. Such outlying hamlets are under the jurisdiction of headmen of larger villages, which are occasionally more than a day's journey distant. Though cattle theft is common, dacoity is no longer rife, and the villagers seem to be willing to take the risk of being robbed rather than insure themselves against it at the cost of a little trouble; consequently fences are on the whole poor, and headmen lax on the point, with the honourable exception of a few who are both vigorous and capable.

ses. Here, as elsewhere, the Burman insists on living above the level of the ground, and houses are always raised on posts, at a height varying from two feet to a man's height. Where the floor is raised well above the earth, the house-owner's cattle are often kept underneath. In the towns there are a few "pukka" houses and many built of wood; but in the villages only a few of the more wealthy can afford a wooden house and others have to be content with walls and inner partitions of matting. The roofs of houses in the villages are thatched with *thetkè*. The result is a collection of inflammable erections which are sometimes burnt up in big fires; but a certain element of safety lies in the fact that houses do not as a rule adjoin closely.

ing. The ordinary *longyi* and jacket of Burma are commonly worn by men, though the *putso* is occasionally seen; the outfit is completed by a head-cloth (*gaungbaung*) and in cold weather a *chin* blanket, which is drawn round the body when the owner sits down. The *tamein*, which exposes the leg in walking, is still worn by older women in the interior, but most women wear the ordinary *longyi* popular in Lower Burma. Silver and gold bangles and earrings are purchased not merely as ornaments but as an

easy way of keeping money among a people which knows nothing of banks. This practice has the drawback of causing gold coins to be withdrawn from circulation and melted down as fast as they are introduced.

Food.

Rice is the staple article of food and is eaten with various relishes, such as dried fish and fried vegetables. The last named dish has to be prepared outside the villages, frying within the village being interdicted by custom, owing to the superstition that the smell is fatal to young children. In times of scarcity, when rice cannot be obtained, the rustics eat the seeds of various plants, as the *kadat* (caper), bamboo and *kaing*-grass, and also a tuberous root known as *pein-u* (yam). The omnivorous Burman does not starve when he cannot obtain his natural diet.

Religion.

It is very rare to find a Burman here who is not a Buddhist, and the popular Buddhism of the country, intermingled as it is with a firm belief in the existence of *nats* and spirits of various kinds, is the accepted creed. The people are not wealthy enough to do very much in the way of works of merit, but most large villages support a *pôngyi-kyaung*. An unwelcome phenomenon is a growing disposition in some neighbourhoods to refuse any longer to maintain the village *pôngyi*, but this is perhaps a passing phase attributable to a series of bad harvests. The principal pagodas of the district have already been discussed.

There is no Christian mission to Burmans. The Society for the Propagation of the Gospel had a school in the town of Thayetmyo formerly, but this is now closed.

CHINS.

Chins are found on both sides of the district, but the chief colony is situated under the Arakan Yoma, in the valleys of the Matôn stream and its affluents. They are supposed to have migrated from the Ngapè valley in the north (Minbu), and though originally nomadic are now settled down in small, permanent villages. There is a settlement of Chins in the plain-land and the hills behind Nyaungbinzeik, extending along the Prome boundary to the foot of the Pegu Yoma. Chin and Burmese villages are often grouped together in the jurisdiction of one headman, and this community of life is rendering the Chin commonly bilingual, while a number of the race are forgetting their own language. The old Chin custom of having the women's faces tattooed (whether as a decoration or to disgust alien admirers) is now practically abandoned. The Chins are good cultivators, making the best of poor opportunities by means of their ingenuity in procuring irrigation.

An elaborate account of the traditions and rites of the

Chins is to be found in Colonel Horace Browne's book on the district. These beliefs survive in the hill villages, but a number of the plain-dwelling Chins are now Buddhists like their Burmese neighbours, while there are a few Christians among them. Thayetmyo is the headquarters of an "American Baptist Mission to the Chins." This work was established in the year 1888. Evangelistic and educational work is undertaken chiefly for the Chins of the Thayetmyo district, but owing to the roving disposition of the tribe operations are also carried on in the Prome, Henzada, Pegu, Magwe and Pyinmana districts. The progress of evangelization has been fairly successful since 1903. The number of communicants in 1908 was 343. An Anglo-Vernacular school for Chins is maintained in Thayetmyo with over fifty pupils, and four vernacular schools in the district with about a hundred pupils.

Other Races.

There is a body of about 1,500 Chinese in the district, the members of which dwell mostly in the two towns of Allanmyo and Thayetmyo. The liquor traffic is almost entirely in their hands.

Natives of India are practically confined to the two towns, more especially to Thayetmyo, to which they have been drawn by the presence of a regiment. Many of these natives of India have intermarried with Burmans, and the result is a curious and somewhat displeasing conglomeration of races in the town of Thayetmyo. A number of the Madrassis are Christians and their spiritual needs are supplied by the Roman Catholic Church which stands in cantonments, with a chapel in the bazaar.

CHAPTER IV.

AGRICULTURE AND IRRIGATION.

AGRICULTURE.—General features. WET CULTIVATION.—Paddy; *Lè* paddy; manner of cultivation; varieties; *Taungya* paddy; *Mayin* paddy. DRY CULTIVATION.—*Ya* crops: sessamum; groundnuts; cotton; maïze; jowar; *Kaing* crops; tobacco; pulse; onions, etc.; silk culture; gardens. PESTS. EXTENSION OF CULTIVATION. LAND TENURE.—Tenants; Indebtedness. CATTLE-BREEDING. IRRIGATION.—Bangôn scheme; Minor works; Matôn water-wheels; wells; General Remarks.

[A]gricul[t]ure. [G]eneral [fe]atures.

The district of Thayetmyo is by no means a fertile one, the greater part of the country consisting of gravelly hills. Hence only 245 square miles out of a total of 4,750 square

miles were under cultivation in the year 1907-08. The following table gives the distribution by townships :—

Township.	Thayetmyo.	Mirdôn.	Kama.	Minhla.	Allanmyo.	District Total.
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.
Area cultivated.	28	40	42	26	109	245

WET CULTIVATION. Paddy

The cultivation may be divided into wet and dry crops, but the only wet crop is paddy. Paddy cultivation is of three kinds : the ordinary lowland practice of working permanent holdings (*lè*), the practice of yearly *taungya* cutting and the cultivation of hot-weather rice by means of irrigation (*mayin*). Of the three the ordinary *lè* cultivation covers by far the largest area.

Lè pad

Lè cultivation is carried on in the level country in the south of Allanmyo township and along the Matôn stream, and on a small scale in the shallow valleys between the low hills in other parts of the district. Altogether rather over one-half of the total area cultivated is under paddy. Irrigation is developing, but there are no facilities for applying it over extensive areas owing to the hilly nature of the country and the narrowness of the valleys in which perennial streams flow. The success of the crop is therefore largely dependent on the rainfall, which is low and never certain. Consequently the district, even in good years, is not self-supporting and paddy has to be imported from Lower Burma. Holdings are generally small, averaging about three acres, and cultivators can hardly under any circumstances produce more than they require for their own consumption. In a bad year they are forced to come into the market themselves as purchasers, and the increased demand for the imported rice sends up the price to a figure which in a district solely dependent on its paddy would be a scarcity price. The average outturn of paddy in these parts is about 25 baskets per acre.

Mann of culti tion.

Only the surface soil is of value for the cultivation of paddy, the sub-soil being sandy and unproductive. Consequently deep ploughing is not practised; and the soil is broken up with the *tun*, which resembles a harrow, instead of the *tè* or plough used in Lower Burma. The first thing done is the preparation of the nursery, which is a

small plot of either well-manured waste near the village or of virgin soil in the jungle and not, as in other districts, one of the plots under cultivation. This nursery is worked to a fine tilth, in order that the seedlings may start well. As soon as sufficient rain has fallen to soften the paddy land proper, the surface is broken up and the seedlings planted out. They are set out by hand in clumps of four or five together at intervals of about six inches. This takes place after the first rains about the end of July. If the first rains fail, an attempt is made to catch the second rains, but a poorer crop is obtained. The second rains in August and the third rains in late September or October are absolutely essential to the success of the crop, and the failure of either is disastrous. All three rains are equally uncertain. In some places along the river, as at Minhla and between Nyaungbinzeik and Pyalo, some cultivators await a rise of the Irrawaddy to flood their fields (*tazè*) before planting, as this gives them not only much-needed moisture but also a valuable deposit of silt. The uncertainty of the rains leads to frequent bad seasons which unfortunately do not come singly. From 1897 to 1901 all crops, including paddy, did well, the outturn of paddy being in each year above the normal standard. But from 1901 to 1908 a spell of misfortune has ruled ; in no year was a normal crop obtained, while in 1907-08 an eight-anna crop only was reaped. Along with this run of ill-success with planted paddy has gone, as is natural, a steady tendency to leave paddy land fallow, and in 1907-08 only 70,000 acres were under paddy as against 100,000 acres in 1900-01. Owing to the hopelessness of attempting to raise a crop if the first and second rains have not been adequate, it is the practice in the district to apply a fallow rate of two annas an acre automatically to land on which there has been no planting.

ieties addy.

The most valuable but most slowly maturing paddy, the *kaukgyi* of Lower Burma, is not grown here, owing to the doubt as to the later rains. The varieties* principally grown in this district are those of the class known as *kauklat* in Lower Burma, but here as *kaukgyi*. The commonest of these varieties is *kunwa*, but *saba-byu* is also grown. Still more rapidly growing kinds (*kaukyin*), including the *thôn-la-byu* variety, are grown to a less extent; they yield a less valuable crop than the others, but are grown in order to be available as food at an earlier date.

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* Colonel H. Browne in 1873 mentions as many as 61 different varieties.

Kauklat is a six months' crop, *kaukyin* a three or four months' crop.

Taungya paddy. In the hills, especially at the foot of the Arakan Yoma, a considerable amount of paddy is grown in *taungyas*. The situation and character of these holdings generally precludes the use of cattle for ploughing. Consequently, the work is done by hand, holes being dug with a sort of spade, *tu-ywin*, in which the paddy is planted. The name of this method of cultivation is *tu-ywin-to* or *su-to*. It does not give such good results as the ordinary method of ploughing practised where bullocks can be used, an acre under *su-to* yielding about two-thirds of what an acre of ploughed land will yield.

Mayin paddy. In the valleys where perpetual streams run—the Matôn group, the Kyini and the Bwetgyi—a certain amount of hot-weather paddy or *mayin* is fairly regularly grown; the fields are irrigated from the streams. In the Matôn valley this irrigation is carried on by means of the water-wheel described later on in this chapter. *Mayin* is a much coarser rice than the varieties grown in the rains. It is planted about February. When the main paddy crop has failed, there is always some extension of *mayin* cultivation in the subsequent dry weather. The *mayin* cultivation near Minhla is a special case, as it is irrigated not from a stream but from a tank which does not get filled unless the river rises in the rains. The area under *mayin* paddy is as a rule little over 1 per cent. of the total area under paddy.

DRY CULTIVATION. The paddy crop being grown exclusively for home consumption, the rural population of the district depends for its profits on the products of dry cultivation, which together with bamboos form the exports of Thayetmyo. The two leading crops of this sort are cotton and sesamum. Next in order come maize, tobacco and onions. At one time, a considerable amount of jowar was grown, but now this is almost abandoned. The dry crops may be divided into three classes: *ya*, *kaing* and *uyin*. *Yas* are permanent holdings, usually on undulating ground where paddy cannot be grown; *kaing* cultivation is that practised in the beds of streams and on islands that are under water in the rainy season; the term *uyin* or garden includes fruit plantations and the like. One feature of the *ya* cultivation is the common practice of mixing seed, or sowing separate patches of different seeds in one small field.

The following table shows by townships the areas in acres under different crops in the year 1907-08. It should be premised that this was the worst year on record for paddy

and consequently, though the dry crops also all fell short of a normal outturn with the exception of tobacco, they were probably grown more extensively than would have been the case had paddy done well:—

Township.	Sessamum.	Cotton.	Maize.	Groundnut.	Jowar.	Tobacco.
Thayetmyo	3,908	1,952	2,118	...	93	620
Mindôn ...	1,863	1,412	1,391	...	...	437
Kama ...	885	1,677	999	...	2	4,877
Minhla ...	7,070	8,017	1,099	52	...	64
Allanmyo	29,454	7,031	4,319	892	304	345
District Total.	43,180	14,089	10,229	944	404	6,843

crops : sa- m.

It will be seen that at present sessamum is by far the most widely grown crop. It will further be observed that it is principally cultivated in the Myedè subdivision and in the Minhla township. In 1871 the area under sessamum in the old district (that is, without Minhla or Sinbaungwè) was estimated by Colonel Browne at about 13,000 acres. During the next twenty years this acreage dwindled considerably despite the fact that the district was enlarged by the part added in the north. The crops in 1893-94 and 1894-95 were very bad, the outturn being 32 per cent. and 25 per cent. of a normal crop respectively. The area under sessamum in the latter year was only 7,716 acres. But in the following year conditions were favourable and the cultivation leapt up to over 35,000 acres. Since that time there have always been between 35,000 and 45,000 acres under sessamum, and in the thirteen years from that year to the year 1907-08 the outturn has been above normal in six years, while the lowest to which it has sunk was 41 per cent. of normal in 1906-07. Like other dry crops it is uncertain, the fluctuations in outturn being far greater than in the case of paddy: thus an outturn of 57 per cent. in 1902-03 was followed by one of 148 per cent. in the next year. Paddy has the advantage over sessamum in that, while a shortage of rain spoils the crop, it is hardly possible to have an excess of rain: sessamum, however, may suffer not only from a deficiency of moisture which will wither the seedlings but also from an excess, which will cause the plants to run to leaf.

The soil most suitable for sessamum is a light, friable soil such as is found in Myedè. The soil on the western side of the river is too stony and the field must be left fallow after a year in which it has been cropped. On the eastern side the soil is better, and by the use of manure a crop may be obtained every year from the same soil. Sowing is carried on at the beginning of the monsoon; the early crop is reaped before the ear is ripe in September and the whole is in by November.

Sessamum is an oil-seed; some of it is sold to traders, but the villagers themselves also express the oil. The oil is used for cooking: and the Burmans prefer the product of their local wooden presses to that of the mills, as they profess to detect the flavour of metal in oil extracted by machinery. The oil cake left after the extraction of the oil is used for feeding cattle. The value of sessamum is four rupees a basket in an average year, the output of one acre being about five or six baskets.

Groundnuts.

The cultivation of groundnut in the district is only a recent experiment. It was found that the crop was successful in the Magwe district, and it was consequently introduced into this district in the hope that it would be as well suited to the soil as sessamum and would suffer less from the caprices of the rainfall. Another slight advantage of the groundnut is that the crop cannot be stolen with ease, whereas other crops in outlying *yas* are frequently removed by thieves. The first season in which groundnuts were grown in this district was that of 1905-06. They seem to have found favour with the agriculturists and their rapid extension is promising. They have progressed best in the interior behind Sinbaungwè in the north of Myedè subdivision. The following table gives details:—

Area in acres under Groundnut.

Year.	Sinbaungwè.	Myedè South.	Minhla.	District Total.
1905-06 ...	15	74	4	93
1906-07 ...	218	127	33	381
1907-08 ...	779	113	52	944

The soil on the west of the Irrawaddy seems less suited

to groundnuts than that on the east. The same experience was recorded in Magwe and Minbu, the adjoining districts to the north of Thayetmyo. A sandy, well drained soil free from clay is necessary. The soil is broken up with a harrow and levelled over with the *kyandun* (a square log dragged over the surface); sowing takes place in the break of the monsoon after the first rains; the crop is gathered in December. The oil of groundnuts is a substitute for sessamum oil for use in cooking. It has a more than local market as it is also largely sold as "olive oil." The principal market for the small quantity of groundnuts produced up to date has been the mills at Ywataung, which also take most of the produce of the Magwe district. The value of the groundnut, unshelled, is about two rupees a basket.

Cotton. The district has long been celebrated for its cotton, which is as good as any grown in Indo-China and was in demand among Chinese merchants before the annexation. In 1872, however, the area under cotton was little over 5,000 acres. It began to be more popular in 1894-95, in which year six times as much land was sown with cotton as in the year before. By 1896-97 the area had grown to over 38,000 acres; and the outturn that year was quite phenomenal (241 per cent.). From that time it was passed in the race by sessamum and has steadily declined since. A reference to the table on page 24 will show that this crop, like sessamum, is grown in all townships but principally in Myedè and Minhla. It is sown at the same time as sessamum, in the early rains, and is often grown as a mixed crop in Minhla and Sinbaungwè, the seed being mixed with that of sessamum and even of paddy. Cotton takes eight or nine months to mature, being plucked in March or April. The slower growing variety (*wagyi*) is most commonly cultivated. If the second and third rains fail the cotton crop is ruined and so the outturn is quite incalculable; it varies more than any other crop, outturns of 14 per cent. and 19 per cent. on the one hand and of 241 per cent. on the other being recorded. A certain amount of cotton is locally spun and woven in the villages, nearly all the rest being sent to the Ywataung mills, where ginning is carried on on a large scale, both by Jamal Brothers and by a new firm, Moolla Dawood. A mill was erected at Sa-aing, north of Thayetmyo, in 1903 by a Marwari firm, but failed after a year's working. There was a Burmese ginning shed in Thayetmyo some time ago, but native methods were unable to compete with the machinery of the mills. After the cotton has been ginned cotton-seed

oil is extracted and exported to Rangoon ; a coarse soap is also made from the seed and used for washing clothes.

Maize. Maize is largely grown, coming next to cotton in acreage, but it is by no means profitable and is sown mixed with paddy or sesamum or alone where the soil is not good enough for the more valuable crops. It is sown throughout the rains and matures in about six weeks. The price varies from eight annas to one rupee per basket (shelled). The following table shows areas under maize for three years (1905-06 to 1907-08) :—

Subdivision.	1905-06.	1906-07.	1907-08.
Myedè ...	4,706	5,517	4,619
Thayetmyo ..	4,159	5,693	5,610
District Total ...	8,865	11,264	10,229

Jowar. In the series of good years which the district enjoyed from 1897 to 1901 a fair amount of jowar (*hnansa pyaung*) was grown. The crop failed badly in the year 1901-02, and this together with a poor market led to the abandonment of jowar ; the cultivation has revived but little since then. It is used as fodder for cattle, and when paddy is scarce is mixed with rice for human consumption.

***Kaing* crops.** *Kaing* crops are grown in the dry weather on land which has been under water in the rains. Such cultivation occurs along the banks of the Irrawaddy and on islands in the river and also along the beds of the larger streams. When the cultivable land emerges on the falling of the rivers, the headman apportions it among the villagers, but where there is any permanency the same party has a claim from year to year. Disputes are submitted to the Myoôk for settlement. The best *kaing* lands are situated at points where the river does not run swiftly, so that the silt carried down by the current is caught and forms a deposit. Where an island is in midstream, the grass and shrubs are sometimes cut off from all but the end which faces up-stream : when the river begins to fall, the vegetation at the top end acts as a break-water, and the heavier clay-like soil falls at once, while the lighter and more valuable soil passes over on to the cleared portion of the island. Thus the surface of *kaing* land is one of alluvial deposit renewed every year. *Mayin* paddy

and maize are grown on *kaings*; but the distinctive crops of this method of cultivation are tobacco, pulse and onion. The district is one of the chief tobacco-producing districts in Burma.

Tobacco. Tobacco is principally grown along the Matôn and Pani *chaungs*. There are generally over 6,000 acres devoted to its cultivation and, considering the nature of the land on which it is grown, this figure is a large one, indicating decided success in tobacco culture. The seed is sown in November in a nursery and planted out in holes drilled in carefully prepared soil. The leaf is cut in April or May. Two varieties are known, the *kya-se* or *ywet-gyi* (broad leaved) and the *Bingala ywetgyun* which has narrow pointed leaves. The latter yields a smaller crop but of better quality. As the name indicates, *Bingala ywetgyun* is of foreign origin, according to the Dictionary of the Economic Products of India (N. 117, Volume V, pages 387—393): it is an American variety introduced many years ago. This is the celebrated Kama tobacco. Other tobaccos with a good reputation, however, are those of Tanyinmaw (Bangôn) and Mindôn; they are of the broad-leaved variety, cured in the following manner: the leaves are piled up in a room to a height of four feet and kept covered up for five days, after which they are shredded and spread in the sun for three days. Tobacco so treated is called *da-hli-se*. The other two methods of curing yield *e-se*, which is hung in the shade for two months, and *set-se*, which is dried in the sun on bamboo frames for five days and then piled up indoors for two months.

Pulse. Numerous varieties of peas and beans are grown on *kaing* land, but no one variety sufficiently widely to deserve special notes. The area under all varieties in 1907-08 was 2,387 acres, of which 216 acres bore *pegyi*.

Onions, etc. Onions are grown at Mindôn, where about 1,400 acres are devoted to them. They form an extremely profitable crop. Chillies, though not confined to *kaing* land, are grown on such land along the course of the Matôn and Pani streams at various points. They occupy altogether some 200 to 250 acres. Tomatoes and other vegetables are grown to a small extent.

Silk. Silk-worm culture is practised in a few villages in the district, a species of mulberry being grown for their food. The chief seat of the industry was Tanyinmaw, near Bangôn (Thayetmyo township), but there it has now almost died out. The worms are now grown in that place solely for the purpose of selling the eggs, and as the cocoon is allowed to

mature, it is not used for silk-spinning. A little coarse silk is still spun in the silk-rearing hamlets on the Pegu Yomas.

Garden

There are nearly 5,000 acres of garden land in the district, mostly devoted to fruit growing. Plantains, mangoes and custard-apples are the principal stocks. The custard-apple of the southern part of the district is famed for its excellence, but plantains and mangoes are mostly of poor quality. An exception must be made in favour of one village near Sinbaungwè, which produces the *net-te* mango for which Mandalay is famous. There is little betel vine grown here, the total for the district being about 60 acres. The gardens are at Allanmyo. Toddy palms are mostly dotted over the plains, but there are a few small plantations.

Pests.

Paddy and sessamum are sometimes attacked by an insect pest; this occurred for instance in 1905-06. The pest, however, has not hitherto attained calamitous dimensions. Another danger is a periodical plague of rats in the Yoma, which destroy nine-tenths of the crops they visit. Elephants and *thamin* do a great deal of damage also; when elephants visit a field they leave absolute devastation behind them. They have a great fondness for plantain groves.

EXTENSION OF CULTIVATION

As far as paddy is concerned, the land is already worked up almost to its limit. Irrigation will only save existing land from failure and cannot add more than a few acres of new paddy land. The miscellaneous *ya* crops may be extended over what is now uncleared jungle. An experiment in this direction is about to be made by the firm of Jamal Brothers, which proposes to establish an agricultural colony of natives of India near Allanmyo. The most successful innovation in recent years has been the introduction of groundnuts: and this is the only direction in which much progress is at present expected.

LAND TENURE

In this district, as elsewhere in the province of Burma, the agriculturist is much attached to his soil. The system of peasant proprietorship prevails almost exclusively. Its permanence is assured by the comparative poverty of the soil, a fact which renders the accumulation of holdings and the formation of large estates much less attractive as a speculation than it is in the delta. The non-agriculturist landlord is almost unknown; those who have money to lend on mortgages sometimes acquire fair-sized estates, but they generally work a part of their land themselves. Mr. Wallace found a paddy holding of 164 acres held by one Burmese money-lender in Kama township, but that a holding so large is exceptional is shown by the smallness of the

average holding. Paddy holdings in the part of the district settled in 1901 average only 2·92 acres, while other holdings were still smaller.

enants. About one-third of the total area under paddy is occupied by tenants, but in some cases the tenant is merely a relative or friend who works the land on terms of privilege, often for a widow or orphans. Regular paying tenants occupy only about one-quarter of the area under paddy. Rents are fairly high ; they are usually expressed not in money but in a share of the crop, a common arrangement being a payment of one-half of the produce. Special arrangements are also made as to payment of revenue. The average rental was found to be between Rs. 8 and Rs. 9 per acre in 1901. The proportion of the land held on tenancies is lower than in most districts. The average area held by tenants is a little over two acres. A large number of tenants are owners of the land who work as tenants to their mortgagees.

ıdebted-ɜss. The Burman cultivator is as thriftless here as elsewhere. Good years are not common, but when they come the profits mean so much more to spend and are not put aside as a stand-by for the coming lean years. The consequence is that a bad year finds the cultivators with no provision to face it ; whether they migrate to the delta or not, they are often forced to sell their cattle and to eat the grain set aside for sowing. Consequently the next season finds them unable even to commence cultivation without borrowing money. Thus the mortgage is resorted to. Another frequent source of debt is the common practice amongst Burmans of borrowing money to meet the expenses of marriages, funerals, *shin-pyu* ceremonies and the like, on a scale beyond their means. Mr. Wallace found that over 39 per cent. of a number of people examined by him were in debt, but this was in a part where holdings were generally larger than elsewhere, and the indebtedness among the smaller holders is probably not so large. Money-lending is mostly carried on by Burmans, who charge a high rate of interest, commonly 60 per cent. Chetties confine their operations to the towns as the smallness of the holdings makes direct dealings with the cultivators both troublesome and uncertain. Loans by Government at low rates are becoming more popular, but the people still seem to think that the greater elasticity allowed by money-lenders in the matter of repayment goes far to counterbalance the enormous difference in rates of interest. Several bad years following an epidemic of cattle disease have brought up the number of applications in a remarkable degree, the advances having risen from Rs. 3,950

in 1900 01 and Rs. 12,000 in 1904-05 to Rs. 41,950 and Rs. 46,275 respectively in the years 1906-07 and 1907-08. At the same time the Land Improvement Loans Act, 1883, has been taken advantage of. Over Rs. 4,000 have been advanced in three years, 1905-06 to 1907-08. Co-operative Credit Societies have not yet reached this part of the country.

CATTLE-BREEDING.

Most of the cattle in the district are actually used in agriculture and not bred for sale. At the census of 1901 there were over 172,000 agriculturists; the average number of persons to a household is about five; we may therefore deduce that there were about 34,000 families of cultivators. In the same year there were about 100,000 head of cattle. Roughly, then, it may be taken that there are about three head of cattle to each household. But in some places the average runs higher. Treating the statistics in the same way we find Minhla township with between five and six head of cattle per household: while for the (late) township of Sinbaungwè the figure is nearly nine head per household. It is thus in the northern part of the district that cattle-breeding for sale is most largely carried on. One village in the Sinbaungwè tract—Taukma—had as many as 2,000 head of cattle to 80 families in 1904.

There is so much waste land in all parts that no grazing grounds have been notified. The owners of cattle can always let them feed in the jungle while there is any grass, and in the dryest weather the land is so burnt up that a grazing ground would be useless. Cattle are hand-fed on the straw of paddy and on dried grass. Green fodder is also grown sometimes, and formerly a certain amount of jowar was grown in Sinbaungwè as fodder. Jowar-growing, however, has been almost abandoned now. Oil cake is sold from the mills at Allanmyo and is used to some extent.

In the north of the district, both in Minhla and Sinbaungwè a certain amount of pony-breeding is carried on. The ponies produced are usually of very small stature but are sturdy little animals.

There was a serious attack of cattle disease in 1904, in which year a Veterinary Assistant was appointed for the district. There are now three. The Burmans co-operate well in efforts to keep disease down, closing the roads between infected and uninfected areas. They are unwilling, however, to adopt the precaution of destroying the hides of cattle which have died of such disease, naturally wishing to save this remnant of the money value of the beast.

IRRIGATION.

The broken hilly nature of the whole district makes the

construction of large irrigation works impossible, though land is often left without a crop for lack of water. The only scope which is provided for this sort of agricultural enterprise is in the construction of small tanks, bunds and channels within the narrow valleys. Occasionally a stretch of a thousand acres or more can be irrigated by these methods, but the works constructed are all decidedly of the category of "minor works," and, when not due to private enterprise, are adequately provided for both in construction and maintenance, out of the District Fund.

angôn cheme. A new scheme, however, of somewhat greater importance than previous ones is now awaiting final sanction. This is a proposal to dam the Chaunggaung stream (as the Bwetgyi stream is called in its higher reaches) and distribute the water over a strip of land between the above-named stream and the Bangôn stream. The area brought under cultivation would be about 3,000 acres. A body of Chins settled near the spot at Bangôn village in 1898 and in the following year erected a bund themselves, which was promptly washed away. Every fresh effort was equally unsuccessful. In 1902 an American wished to undertake the work and applied for a grant, which was refused owing to the objection of the Chin villagers who urged their prior claim. His application, however, raised the interest of officials and it was proposed to take up the work out of the district funds. In expectation of its speedy completion the Chins of Bangôn (105 in number) and 77 Burmans expressed themselves willing to take up potta grants. They were disappointed in their hope that the work would be executed soon, as it was represented that the necessary works, including a masonry weir, were of too costly a nature for the Deputy Commissioner to take up lightly without a more careful survey than the District Fund Overseer was competent to make. The scheme was therefore referred to the Public Works Department, and it has now, after considerable delay, been submitted for sanction and is to be carried out from provincial, not local, funds.

Minor Works. One other work of some magnitude was recently proposed at Kangyidwin, near Minhla. Two thousand acres would have been supplied with water by this scheme, but it fell through owing to the porous, gravelly nature of the soil, which would have prevented the effective retention of the water in the tank. There are four small tanks in the Minhla township, which were erected out of provincial funds in 1898. These were relief works and proved of little actual service; and in 1906 they passed into the direct control of the Deputy Commissioner. He also maintains several other

small works in various parts of the district, of which perhaps the most notable is one at Pyalo, watering some 200 acres. The petty irrigation works scattered over the district are in most cases the result of private enterprise often supported by loans under the Land Improvement Loans Act. Apart from more permanent operations, the upper valley of the Pani stream contains every year a number of temporary dams of sand and timber which suffice to irrigate a few acres in the dry season, as well as in the early rains.

It is Chin ingenuity which has devised the water-wheels which serve to irrigate land for *mayin* paddy along the course of the Matôn *chaung*. These wheels are erected in the dry weather. They are light structures of bamboo and, if not dismantled, are swept away by the first flood that descends the valley. The wheel is turned by the current of the stream, and bamboo floats attached to the circumference raise the water into wooden flumes whence it flows through distributary channels. These wheels when revolving form an interesting and picturesque feature of the landscape. Matôn water-wheels.

There are numerous wells in the district, but almost all are for drinking purposes only. None are used for watering paddy or other common crops, but a few are attached to the betel gardens of Allanmyo and the market gardens of Thayetmyo. Wells.

Altogether there were 49 minor irrigation works returned in 1906, of which some were merely drinking-water tanks. Of all land cultivated, the percentage of irrigated land has varied in recent years from 5 to 10 per cent. Vigorous encouragement of small works by means of loans is a recent development, and up to 1900 the percentage of irrigated land had never risen above 2 per cent. The increase has been most remarkable in the Allanmyo and Minhla townships. Gener[al] Rema[rks].

CHAPTER V.

FORESTS AND MINERALS.

FORESTS.—Their former condition; Beginnings of conservancy; Limits of present division; Administration; Existing forests; Principal timber species; Reserves; Working plans; Revenue; Exploitation. MINERALS.—Petroleum; Coal; Iron ore; Clay and limestone.

For many years before the second Anglo-Burmese war Burma had been a great timber-exporting country: the exports from what is now the Thayetmyo division being For[ests.] The[ir] pre[vious] con[dition].

mostly of teakwood. As the country is thickly wooded it no doubt presented to the eye much the same condition as now, and as the wholesale extraction of teak was stopped in time the damage done to the forests through indiscriminate felling has not proved irreparable. British administration has been characterized by the formation of large forest reserves and other restrictions on the extraction of teak.

After the war of 1852 the first steps taken in the province of Pegu, which included the southern half of the present Thayetmyo division, were entirely of a protective nature. All forests were declared Government property and all timber removed after the end of May 1853 was subjected to confiscation. In 1854 supplementary regulations were issued to provide for control over owners and the establishment of a contract system. The Pegu forests were thus first brought under regular conservancy by rules published in 1856. These were beneficial in checking to some extent the destruction of teak. Still more stringent rules were enforced later under the Indian Forest Act of 1865. In 1868-69 a revised working plan was introduced experimentally, its operation to last for five years; by this plan the number of trees to be girdled was fixed at 11,600 and the artificial cultivation of teak on 350 acres annually was insisted on. The above figures were for the whole area under British administration, a small fraction only of these works being carried out in what is now the Thayetmyo Forest Division.

The Thayetmyo Forest Division as now constituted coincides with the Thayetmyo Civil District, along with which its area was very considerably increased by the addition of territory in the north after the annexation of Upper Burma. It is under the Pegu Conservatorship, forming the most northerly division of that charge. The area of reserved forests stood at 577 square miles in 1908, and in the same year the division contained 2,885 square miles of unclassed forest.

The division is usually in the charge of a Deputy Conservator of Forests. The division contains four ranges separated by the Irrawaddy river north and south and by a line which follows approximately the old frontier line east and west. This line cuts the division about ten miles north of Thayetmyo. Each of those ranges is held by a range officer, usually a Forest Ranger, and each range is divided into beats, looked after by a forester or forest guard

with Deputy Rangers at important stations. There are three depôts in the charge of Deputy Rangers. Besides the above, the charge of the revenue work on the Irrawaddy river forms a separate charge, is called the Irrawaddy range and is in the charge of a range officer.

Existing forests.

The forest growth is, as determined by the climate, mostly of the dry *indaing* type in the north and near the river, improving in quality and density southwards and away from the river on either side towards the Yoma.

On the east, the Pegu Yoma and its foothills are covered with excellent teak forest, the value of which is, however, diminished by the poor quality of the floating streams. Between the foothills and the river there is good mixed forest of *in*, *thitya* and *ingyin*, interspersed with patches rich in teak trees of small size. The soil, however, is not unsuitable for teak, and rigorous administration of the law against unauthorized extraction will no doubt lead to an improvement in the size of the trees. The Yomas themselves are not fertile in cutch, but elsewhere in the eastern range it grows in profusion.

On the west the hills are much higher and the vegetation passes into the evergreen type. Towards the north-west India-rubber trees (*Ficus elastica*) are found. With the exception of the north which is of the dry *indaing* type, teak is found over practically the whole of the western side but does not attain the size of that on the east, nor are the western Yomas covered with good teak forest as on the east. Cutch is plentiful on this side of the river also, with the exception of the northern *indaing* regions. The floating streams are better here than on the east, but are not of the first class. A curious feature of the western Yomas is the occurrence in the hills of open grass areas called *kwins*, probably the result of *taungya* operations by Chins in bygone years. *Taungya* cultivation proper and the shifting cultivation of lowland *yas* are largely practised over the whole region. This wasteful practice alone would have made conservancy a necessity.

Principal timber species.

Of reserved trees the principal timber species at present extracted for trade or domestic use are :—

(*Tectona grandis*), Teak.
(*Acacia catechu*), Cutch.
(*Xylia dolabriformis*), Pyinkado.
(*Pterocarpus indicus*), Padauk.
(*Albizzia Lebbek*), Kokko.

Of unreserved trees the principal species at present extracted are:—

(*Dipterocarpus tuberculatus*), In.
(*Pentacme suavis*), Ingyin.
(*Shorea obtusa*), Thitya.
(*Bombax insigne*), Didu.

Reserves. There are a number of reserves throughout the division, but most of these are of small size. The three largest are the Shandatgyi reserve, which has an area of 32 square miles; the East Yoma reserve, which has an area of 128 square miles; and the West Yoma reserve, with its annexes, the Made and Ngawet reserves, having an area of 310 square miles. A working plan has been made for the East Yoma reserve and came into force in 1907.

Working plans. Besides the East Yoma reserve, working plans have been prepared for the Tindaw and Satsuwa reserves in the Myedè range, all three reserves being brought into one working circle. The main provision of this plan was for the girdling of a thousand teak trees annually. Other arrangements for the extraction of *pyinkado*, cutch and *padauk* were made, but owing to the distance of the forests and the poor communications nothing has been done up to date. Other works, such as improvement fellings, *taungya* plantations, fire-protection, construction and repair of roads and bungalows, clearing and blasting of streams, receive due attention yearly.

A preliminary working plan for the forests on the western Yoma is expected to be compiled shortly.

Revenue. The average net revenue during the five years 1902 to 1907 was slightly over 1½ lakhs of rupees.

Exploitation. Teak is extracted by two methods. Under the system of Government contractors contracts are issued for the delivery of teak at the depôts on the Irrawaddy. All the work is done by the contractor, and on delivery he is paid at a fixed rate by the tonnage. The other system is that of extraction by private traders, for whom trees are hammer-marked, the amount of revenue being then calculated and a license for felling issued on payment. The Bombay Burma Trading Corporation, Limited, has recently taken over the lease of the East Yoma Working Circle with effect from the 1st January 1909.

Reserved timber trees other than teak and unreserved timber are extracted under prepaid license only. Prepaid licenses are also necessary for the extraction of bamboo and other minor forest produce. The trade in bamboos is large.

Minerals. The history of mineral exploration in this district is a long story of disappointments. In several directions

researches have been and are still being made, but in no case have they been, in a commercial sense, successful. Coal has been found, but not in workable quantities; earth-oil is clearly present in several places, but no good well has yet been bored; iron ore is known to exist on the east side of the river, but has never attracted any modern enterprise. Perhaps the greatest disappointment of all was a supposed discovery of precious stones in *indaing* jungle near Kyaukpadaung; specimens were submitted to an expert, who reported that what was believed to be a catseye was an agate of poorest quality and that the other stones were quartz pebbles worth only an anna or two. Near Taingda and Myothit are found old brine-wells which were worked in Burmese times, but Government has prohibited the production of salt. Laterite found here is not of good quality, and steatite is only found in the Arakan Yomas, too remote for profitable extraction. The only mineral industries which are really living are the extraction of limestone, gravel and clay.

Petroleum.

Oil has long been known to exist in the district at Padaukbin, Banbyin and Yenanma, all of which places are in the northern portion of the Thayetmyo subdivision. The oil at Padaukbin was mentioned in the "Reprint of Geological Papers on Burma" published in 1882 as being precisely similar in every respect to that of Yenangyaung. The oil at Banbyin was less thick and viscid and of value as a lubricant. As far back as 1875 exploration was being made by Messrs. Finlay Fleming & Co., as well as several other firms. Since then experimental wells have been bored from time to time. In 1885 oil issued from a well at Padaukbin, but very slowly, at the rate of one barrel a month. The oil oozed through fissures in a hard blue shale, a very unpromising condition. The Burma Oil Company renewed their activity in 1903 at Padaukbin, Banbyin and Yenanma. At Padaukbin five or six bores were abandoned, and though a fair amount of oil issued from another bore it was so mixed with water, which could not be exhausted, as to be worthless. The borings at Banbyin were even less successful, three wells of over 1,000 feet in depth being bored in vain. The workings here and at Padaukbin were abandoned in 1906. At Yenanma there are clear indications of oil, for it oozes out in the bed of a stream. Prospecting is still carried on by several firms in the neighbourhood, but with little promise.

Near Aukmanein the Burmans extract a little oil by hand-digging: about 18 persons are regularly employed, and in 1907 the amount obtained was 627 gallons.

oal. Coal was discovered in the limestone hill of Tondaung, a few miles below Thayetmyo. In 1855 it was favourably reported on as suitable for steamer engines, but the promising first appearances were found to have been deceptive. Mr. Oldham, Superintendent of the Geological Survey of India, reported in 1855 that the beds of coal within the short distance of 15 feet in depth and 15 feet in length had been reduced to a thickness less than half their original size, and had further become so mixed with clay and earthy matter as to be useless. A syndicate known as the "Murray Coal Co." had an agent prospecting from 1883 to 1886, but the work was again abandoned as profitless. Coal of poor quality was found at Kan-nge in the Minhla township in 1899. There has recently been some prospecting for coal in the Mindôn township.

n ore. In the sandy bed of the eastern side of the district occurs "a remarkable development of concretionary peroxide of "iron". . . . . "Under Burmese rule this ore was exten-"sively smelted, but no furnaces are now anywhere at "work in the district. Remains of furnaces, which were "merely rectangular kilns cut in the firm alluvial clay "of some steep bank, which gave easy access at top for "replenishing ore and fuel and below for withdrawing the "products, are numerous about Shuebandor,* Kiungale † "and Yebor‡, together with slag heaps". . . . "The intro-"duction of English iron and steel has doubtless been the "main cause of the abolition of this branch of industry, "aided by the harsh and injurious system of the Burmese "officials during the early struggles with the British; but "in some places it was alleged that the iron workers had "fled the country to avoid being forcibly transported to Cal-"cutta to make iron for the terrible foreigners."—(Reprint of Geological Papers on Burma,§ 1882.) Similar old smelting furnaces are found about Kyauksaungsan, where fresh experiments have recently been made in a tentative way.

y and estone. The only products on which mineral revenues, apart from fees on exploring licenses, are collected are clay, gravel and limestone. Clay suitable for the manufacture of bricks and pottery is found in several parts and especially in the near neighbourhood of Thayetmyo town. The amount extracted in 1907 was 450 tons. Only a small quantity of gravel was taken out in the same year and that only on the Myedè side. The demand for limestone is very varying and the output consequently has fluctuated between ten thousand and a

* Shwebandaw.
† Kyungale.
‡ Yebaw.
§ Pages 188 and 189.

hundred thousand tons. There are a number of lime burners in the villages at the foot of the Tondaung below Thayetmyo, where the principal quarries are situated.

CHAPTER VI.

OCCUPATIONS AND TRADE.

OCCUPATIONS.—Agricultural pursuits. ARTS AND INDUSTRIES.—Silversmiths; Cotton weaving; Pottery; Other industries; Factory industries. TRADE.—Imports and exports; Local trade.

OCCUPATIONS. Agricultural pursuits.

The population of the district of Thayetmyo is essentially dependent on agriculture and its subsidiary pursuits. In 1907 the agriculturist population formed 72 per cent. of the total for the district; and, if the townspeople of Thayetmyo and Allanmyo are excluded, 79½ per cent. of the total. Very few of those who are not cultivators work at anything else than the trades of ordinary village artisans: while the towns are country towns, depending on their position as centres of agricultural trade for their prosperity. As the villagers do not produce enough rice for home consumption but have to buy imported rice, small brokers are naturally numerous.

ARTS AND INDUSTRIES. Silversmiths.

The only handicraft for which the district has any reputation is that of the silversmiths. The *padein-sayas* of Thayetmyo are probably amongst the most celebrated in Burma for the excellence of their workmanship. They turn out work both in silver and gold; but the demand is chiefly for silver bowls. Their art is typically Burmese in character, with figures standing out in bold relief and the whole surface covered with careful, if to the occidental eye excessive, detail. The recent influx of tourists into Burma is producing its effect here, a tendency to turn out hasty and sometimes slovenly work having appeared; but the old perfection of workmanship is not yet lost and can still be obtained by purchasers who take an interest in what they order.

Cotton-weaving.

The material produced by the small looms seen in villages is merely a coarse cotton cloth for domestic use. The industry is not extensive, and cotton cloth is not exported from the district. Cotton-weaving, in fact, is a useful occupation for women in the house, and is hardly to be classed as industry.

Pottery.

As elsewhere in Burma, the round earthen vessel is used for all domestic purposes and the potter is always sure of a

market for his wares. Suitable clay is found in the district, and the local demand for earthenware is supplied from local sources. Only the roughest unglazed article is produced. The village of Sa-aing, a few miles north of Thayetmyo, specializes in this industry. In the neighbourhood of Thayetmyo also the clay is suitable for the making of bricks and there are several brick-fields.

Other industries. A number of persons find work in weaving mats from bamboo strips and the number is always swelled in years of scarcity.

These bamboo mats are exported in considerable numbers. Boat-building, cart-making and carpentry are carried on to meet local needs. The only other industry deserving of note is the making of *panats* or Burmese slippers.

Factory industries. Factory industries are situated only at Allanmyo, and were till recently the monopoly of the firm of Messrs. A. S. Jamal Brothers. The multifarious activities of this firm seem likely to leave no stone unturned by which prosperity might be brought to the district. But despite excursions into agriculture and the search for petroleum their principal interest is in their cotton-ginning and oil-crushing mills at Ywataung. The raw cotton and the groundnuts which they use are purchased from other parts of the dry zone as well as from Thayetmyo district. Oil is extracted not only from groundnuts but also from the cotton seed thrown out in the ginning. The establishment also includes a saw-mill, which serve to prevent the engines lying idle in the slack season for cotton; and a cotton-spinning plant is shortly to be set up. The ginning mill was established in 1896. The groundnut oil-mill was erected and installed in 1907, the opening ceremony being performed by the Financial Commissioner. The groundnuts are not decorticated, but are partly crushed and steamed before entering the hydraulic presses. The oil is used for cooking and the oil-cake finds a reliable market in Holland. The labour employed is almost entirely Burmese, but the management is in the hands of natives of India. The average numbers of persons daily employed in 1907 were in the cotton-ginning and the pressing works, 120 men and 130 women; in the groundnut oil-mill, 69 men and 20 women; in the cotton-seed oil-mill and refinery, 34 men and 10 women; in the saw-mill, 22 men and 10 women: in all a total of 415 hands.

A new firm, that of Messrs. Moolla Dawood & Co., erected sheds and started working in 1908. The mill is situated in Allanmyo. Operations are at present confined to cotton-ginning. A Marwari firm erected a mill for cotton-

ginning by machinery near Sa-aing, a little to the north of the Thayetmyo fort, in 1903; but this enterprise soon failed and the mill is now abandoned.

There are two small petroleum refineries at Allanmyo, the oil being of course imported from the Yenangyaung oil-fields. The average number of persons employed by the two together was only 10 in 1908.

There are two printing presses in Thayetmyo—the Maha-ambathirein press and the Regimental press.

Trade. The above detailed facts will show that the district is no busy industrial centre. A natural corollary is that there is no remarkable feature about its trade.

Imports and exports. Imports are rather articles of domestic requirement than raw materials, with the exception of the cotton and ground-nut brought to the Ywataung mills. The chief items among imported goods are rice, *ngapi*, etc., and silk and cotton piece-goods. Similarly, apart from the not extensive out-turn of the mills, exports consist chiefly of the surplus products of agricultural pursuits, cattle, raw cotton (from the south), tobacco, onions and the like; cutch, bamboos and bamboo mats are also exported. Cattle from the eastern side are taken out by the Prome road. Otherwise most of the export and the import trade has as its centres the principal ports of call of the Irrawaddy Flotilla Company's steamers.

Local trade. Local trade is carried on partly by brokers and partly by traffic in the bazaars situated in Thayetmyo, Allanmyo, Minhla and Kama. The first two are municipal bazaars and the others are controlled by the District Fund authorities.

CHAPTER VII.

Means of Communication.

Waterways; Roads in Myedè; in Thayetmyo subdivision; through routes by land; Rest-houses; Rates of cart, coolie and boat hire; Post and Telegraph.

Waterways. The district being traversed by the Irrawaddy, the principal method of communication is by water. The largest towns or villages in the district are Thayetmyo, Allanmyo, Minhla, Sinbaungwè and Kama, and these are all on the river bank. The principal trade centres are Thayetmyo, Allanmyo and Kama. The steamers of the Irrawaddy Flotilla Company connect the district with Upper Burma on the one side and with the important centre of Prome on

the other. No railway line runs into the district, the terminus being at Prome. Thayetmyo and the principal riverine villages are connected with Prome and Minbu by a daily service of ferry steamers. The stations called at within the district are (going northward) Kama, Nyaungbinzeik, Pyalo, Thayetmyo, Allanmyo, Nyaungywa, Nyaungbintha, Sinbaungwè and Minhla. Thayetmyo and Allanmyo are also connected by a small steam ferry boat which plies to and fro four times a day, calling at Ywataung.

In addition to the above facilities, there are the bi-weekly mail steamers of the Irrawaddy Flotilla Company from Rangoon to Mandalay, which call at Thayetmyo and Minhla and connect the district with all principal towns on the Irrawaddy. The up mail calls on Wednesdays and Saturdays, the down mail on Thursdays and Sundays.

Other villages on the river are generally reached by country boat. There is also traffic by country boat between Mindôn and Kama, from the rainy season to March, down the Matôn stream.

Roads. Communications inland are fair. There are about a hundred miles of metalled road in the district, and in addition nearly two hundred miles of roads which are cleared and partially bridged and drained. Elsewhere also there are passable cart-tracks linking the villages, and there is no place which is inaccessible in the rains; the worst that can happen is a delay of two or three days caused by a passing flood in one of the streams. But, away from made roads, it is generally necessary in the rainy season to travel on foot and to employ coolie-transport, as the numerous torrents to be crossed and the muddy state of the tracks preclude the use of ponies or carts.

In Myedè. The portion of the district best served by roads is the southern part of Myedè subdivision. The Rangoon-Prome road is carried on as far north as Allanmyo, and thirty miles of this extension lie in this district; the road runs a mile or two to the east of the river-bank, and there is a short branch of metalled road connecting it with Nyaungbinseik, while the gates of Pyalo open straight on to the road. There is now no bridge where the road crosses the Bwetgyi stream. A wooden bridge, 450 feet long, was built thirty-five years ago, but failed to stand for long, the muddy bed of the creek affording no foundations. There is a ferry which plies when the stream is high, but the absence of a bridge detracts seriously from the usefulness of the road.

In addition to the Prome road there is a metalled road

running into the interior of the subdivision. The first stage is $13\frac{3}{4}$ miles to Kyaukpadaung, where there is a Public Works Department bungalow. The road here forks, the southern branch leading to Shwebandaw ($26\frac{1}{2}$ miles from Ywataung), the northern to Thabala ($23\frac{3}{4}$ miles from Ywataung). The southern road was originally intended to cross the Yoma, and is still nominally the "Ywataung-Toungoo" road; it was never carried beyond Tindaw, however. A road was made running east from Thabala to Thetngèbyin, neither metalled nor bridged, and from Aungmyingôn, two miles west of Thabala, a road with a few bridges leads north to Ôkshitkôn and Kangyaung in the north-east corner of the district. It was originally continued into the Magwe district, but the northern part has not been kept up. Both these roads are hardly passable for carts in the rains.

There are no roads maintained in the northern part of Myedè (the former township of Sinbaungwè), but the cart-tracks are fair. One through route from Taungdwingyi to Allanmyo crosses this region, passing through Mauktin, between which point and Allanmyo a new road has been surveyed and partially cleared. It is proposed to continue this road to the Magwe border.

In Thayetmyo subdivision.

The Thayetmyo side of the district is not so well off in the matter of roads as Myedè, partly because of the more hilly nature of the country, partly because the population is much more scattered. Apart from the short lengths of a few miles, the only metalled road is that which leads out, almost due west, from Thayetmyo to Kyaukkyi ($21\frac{1}{2}$ miles). This is the first section of the Mindôn road. Though Mindôn is a township headquarters, it was held that the traffic was not enough to justify the expense of continuing the road from Kyaukkyi and the work was stopped by orders of the Local Government. The stretch between Mindôn and Kyaukkyi is unmetalled and only partially bridged; as such, it is maintained by the Public Works Department. In the wet weather the rising of the Pani *chaung* and of a stream, the valley of which is followed from Yegyansin, often holds traffic up for a day or two.

There are unmetalled roads, now maintained from the District Fund, connecting Yegyanzin (on the Mindôn road), Shandatgyi and Myothit, thence traversing Minhla township through Yenanma to Minhla on the river. A branch road connects Thayetmyo with Linkè and Yenanma. These roads, totalling to a length of 126 miles, were all made in the time of the dacoit-hunting which followed the annexation of Upper Burma. The object was not so much to

provide easy communications as to render convoys secure from ambuscades, and incidentally to give employment to surrendered dacoits in the making of them. Little was done, therefore, beyond clearing a broad passage through the jungle, leaving only shade-giving trees. These roads are consequently very rough in places and the ordinary cart-tracks sometimes offer better alternative routes. Such an alternative, for instance, is a route from Thayetmyo to Shandatgyi. Instead of following the road by Yegyanzin, this route leaves that road a little beyond Nathè and follows a long ridge to Kanyitkya. Thence a range of hills is crossed to Gwedauk, on the Pani *chaung*, whence the road runs parallel to the Pani stream, only crossing it once.

An unmetalled road inland to Linkè leaving the river at Zaunggyandaung, opposite Sinbaungwè, has been recently marked out.

hrough ›m-unic-ions by ›nd.

Apart from river transit, the only places outside the district with which there is regular communication are Prome and Taungdwingyi. The former town is reached by the Prome road. There are only cart-tracks to Taungdwingyi, though a district road as far as Mauktin is being constructed. North of Mauktin this route passes through Sinmadaung and Sanaing, and thence to Satthwa in the Magwe district. The route now commonly used, however, passes to the west of Mauktin and Sanaing. This is an important route, in view of the large trade in paddy from Taungdwingyi in bad seasons and the rapidly increasing trade in cotton and groundnuts brought from the northern part of Magwe district to the mills at Allanmyo.

est-ouses.

There are a fair number of rest-houses managed either by the Public Works Department or the District Fund. On most of the principal routes they occur at intervals of about ten miles. Some of those that lie off the beaten track are but poor buildings; but all contain simple furniture. As in other parts of Burma, the traveller is not entirely dependent on the public bungalows, since Burmese *zayats* are to be found at most villages of any size. Some of these give quite comfortable quarters. The best is a rest-house at Nyaungbinzeik, which was erected by the villagers, the District Fund bearing half the cost. Only in the highest and wildest mountain tracts is the use of tents necessary.

ates of art, oolie and oat hire.

Carts on the Thayetmyo side are small owing to the roughness of the roads. In Myedè a larger size is commonly used, and there are also a few light carts used with trotting bullocks. Usually, however, a traveller's kit has to be sent on by slow bullock carts, and this limits the distance that can

be covered in a day. Except on good roads, or on emergency, it is well not to arrange a tour with stages of more than 10 or 15 miles. The regular rate of cart hire is two annas a mile. When coolie transport is used, the same rate is paid for each cart-load, that is for from four to five men. The usual rates for the hire of country boats are:—

	Rs.
Minhla to Thayetmyo	10
Sinbaungwè to Thayetmyo ...	6
Thayetmyo to Peikthalein	2
Thayetmyo to Kama	6
Mindôn to Kama	16

Post and Telegraphs

Postal facilities are sufficient. The Prome ferry gives a daily service with Rangoon. There are three Post-offices (Thayetmyo, Allanmyo, Minhla) and four branch Post-offices (Mindôn, Kama, Ywataung, Sinbaungwè). There is no district fund service. Mindôn, Shandatgyi and Myothit used to be connected by such a service, but this has been abolished, the expense of it being out of all proportion to its utility.

There are four Telegraph offices in the district: Thayetmyo, Allanmyo, Sinbaungwè and Minhla. Communication is also kept up between Thayetmyo and Kama by means of a heliograph, Pyalo being the intermediate station; but this is not done regularly.

CHAPTER VIII.

FAMINE AND SCARCITY.

Owing to the vagaries of the rainfall, the district of Thayetmyo is always on the brink of scarcity; and it cannot be denied that poverty is normal and want not infrequent among the agriculturists. From time to time this want develops into actual scarcity of an alarming nature, but owing no doubt to the lack of homogeneity in soils and cultivation, the evil is as a rule sporadic. Thus, taking recent years of serious scarcity, in 1903 only the interior of Myedè, near Shwebandaw, was involved; the neighbourhood of Minhla in 1897; and the Sinbaungwè region in 1891 and 1894.

Occasionally, as in the above cited cases, distress has been sufficient to cause alarm to the authorities. The Burmans, however, have hitherto found their own remedies for the evil. The assistance given by Government has been generally confined to the free issue of cutch licenses, which

has become a regular practice in bad years: and cutch boiling together with the cutting of timber and bamboos, the weaving of mats and, in the north, the sale of cattle and ponies have given sufficient occupation to the stay-at-homes; while the great resource is temporary emigration to Lower Burma, where the men find work as cart-drivers or coolies. Sometimes two-thirds of the adult male population will thus leave a village. This emigration is a regular habit, though of course the numbers increase considerably in bad years, and it is a most useful safety valve. The worst danger to the district is a famine in Lower Burma, and that is an almost impossible contingency.

The above-mentioned natural remedies are so effective that the opening of famine relief works was not considered necessary in 1891 or 1894. Test relief works at famine rates were opened in the later years of scarcity; in 1897 on repairs to the Mingan tank, and in 1903 on a bund at Baye; but in each case the zeal of officers met with an absolute rebuff, the cultivators refusing to work at the low rates offered and not a single volunteer coming forward in either case.

It is clear, then, that scarcity has never yet in this district attained a sufficient gravity to warrant the use of the term "famine," as understood in the peninsula of India.

CHAPTER IX.

GENERAL ADMINISTRATION.

GENERAL ADMINISTRATION.—Subdivisions; Townships. JUDICIAL ADMINISTRATION.—Civil; Registration; Criminal Justice; Crime; Police; Jails. PUBLIC WORKS DEPARTMENT.—District Fund.

GENERAL ADMINISTRATION.

The district as it now stands is cut across almost in the middle by the old British and Burmese frontier, and only so much of it as lies south of this line has been under British administration since 1853. The northern parts were added after the annexation of Upper Burma. Minhla, indeed, was a separate district for a year or two after the last war, but in 1887, when the Civil authorities had begun to get some control over the dacoits, it was finally amalgamated with the Thayetmyo district.

From the annexation of Pegu in 1853 till 1870 the southern portion of the district was a subdivision of the Prome district. In 1870, however, Thayetmyo was made the charge of a separate Deputy Commissioner. Till the annexation

of Upper Burma, the district was included first in the Pegu Division and later in the Irrawaddy Division. After Upper Burma became British territory Thayetmyo was transferred to the charge of the Commissioner of the Southern (later Minbu, now Magwe) Division.

As elsewhere in Burma, the resident head of the district is the Deputy Commissioner; he combines in his own person the general and revenue functions of the Deputy Commissioner and Collector, and the judicial functions of District Magistrate and Judge of the District Court.

Subdivisions. For purposes of administration the district is divided into two subdivisions: Thayetmyo and Myedè (the latter with its headquarters at Allanmyo). These lie on the west and east, respectively, of the Irrawaddy. This arrangement has not always been in force. Before the war of 1885 there were two Assistant Commissioners in charge at Thayetmyo and Allanmyo. After the annexation a new subdivision, that of Minhla, was established. This subdivision coincided fairly closely with the present township of Minhla. For some time during the stress of the dacoit-hunting it was found necessary to have the Subdivisional Officers stationed in the interior, so that they might be ready to strike instantly; thus the Thayetmyo and Minhla subdivisions had their headquarters for a year or two at Yemyet and Linkè. In 1897 Sinbaungwè township was added to the Minhla subdivision, but in 1898 it was with almost universal approval restored to the Myedè subdivision. In 1905 the Minhla subdivision was abolished and the Thayetmyo subdivision made coterminous with the district on the west bank of the river.

Townships. There are at present five townships in the district: Thayetmyo subdivision contains the townships of Thayetmyo, Mindôn, Kama and Minhla; the township of Allanmyo coincides with the subdivision of Myedè. The last-named township is so large and work is so heavy that an additional Township Magistrate is regularly appointed.

At the time of the annexation of Lower Burma, as many as eight Myoôks were appointed in the southern part of the district, their charges being Thayetmyo, Myedè, Butlè, Nyaungbinzeik, Mindôn, Mindat, Kama, and Myawadi; Mindat, however, was soon joined to Mindôn, and in 1861, when the Police Act relieved Myoôks of police duties, their numbers were reduced by the amalgamation of Butlè and Nyaungbinzeik with Myedè and Myawadi with Kama. This left the existing townships of the south of the district.

The annexation of Upper Burma in 1885 added three townships: Minhla, Taingda and Sinbaungwè. The town-

ship of Taingda, with headquarters at Shandatgyi, was the centre of disturbances that followed the war, but it lost its importance when the dacoits were stamped out and in 1897 it was amalgamated with Minhla. Sinbaungwè was a township headquarters till 1906, when in consideration of the lightness of work there it was added to Allanmyo. The addition leaves Allanmyo a township of unwieldy dimensions, and it is possible that before long some new and more equal division of the township will be devised.* The general, judicial and revenue administration then is in the hands of a Deputy Commissioner, assisted by two Subdivisional Officers, five Township Officers and one Additional Township Officer. The headman forms the link between this staff and the people. In 1908 there were 723 village headmen in the district, of whom most collected revenue receiving a commission for the service; but a few circle *thugyis* are still left in the district.

JUDICIAL ADMINISTRATION. Civil.

Though the district is in the Magwe Division, it is placed for judicial purposes in the jurisdiction of the Divisional and Sessions Judge, Prome Division. This arrangement is necessary as Lower Burma Law is administered throughout the district. Within the district the Civil Courts are of three grades. The Judge of the District Court is the Deputy Commissioner. This Court has little original work: for example, insolvency proceedings are rare, as there is no commercial activity, which means that little credit is asked or given. The bulk of the Court's work is the decision of appeals from the Township Courts. Next in rank come the Subdivisional Courts, and below these the Township Courts. At Thayetmyo the Treasury Officer is an Additional Judge of the Township Court and is invested with the powers of a Small Cause Court for cases arising within the limits of Thayetmyo Municipality. The Township Judge of Allanmyo has similar powers.

Civil litigation is mostly concerned with small disputes connected with land or money, the commonest type of case being the simple money-lender's suit on a promissory note. The lack of a wealthy or commercial element is sufficient explanation of the absence of suits of value. The following figures show the average number of suits instituted yearly in each class of Court during the decade 1898—1907:—in the District Court, four suits, average value Rs. 4,167; in the

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* Since the above was written, the formation of an Eastern township has been definitely arranged, and the headquarters will be at Thabala.

Subdivisional Courts, 29 suits, average value Rs. 834; in the Township Courts, 1,219 suits, average value Rs. 69. The average value of all suits taken together is almost exactly Rs. 100. In the course of thirty years there has not been much change in the number of suits filed, though in 1871 the average value was only about Rs. 60.

These small civil suits are as often as not conducted without the aid of advocates in the outstations. At headquarters pleaders are generally employed, but the work is not of sufficient importance to attract men of any particular attainment, and resident advocates are as a rule Burmans and members of the 3rd grade of pleaders. There are 47 headmen with civil powers.

Registration

The Deputy Commissioner and the Treasury Officer are Registration Joint Registrars, and there are Sub-Registration offices at township stations. Little remark is called for on this branch of official activity, since the small value of estates and the absence of large commercial transactions render it an unimportant one.

Criminal Justice

There being no separation of Executive and Judicial functions, nearly all magistrates are also executive officers and Civil Court Judges. There is, however, a bench of honorary magistrates sitting at Allanmyo. The other Courts are those of the District Magistrate, the Subdivisional and Township Magistrates, a Headquarters Magistrate and one or more additional Magistrates. All headmen exercise limited criminal jurisdiction for petty cases, while 31 have special powers under the Village Act.

Crime

The district is not one of the worst in Burma for crime, but its position in this respect is by no means good. Gambling is very common in all parts. This and drink are responsible for most of the violent crimes that are committed, cases of grievous hurt and murder occurring with deplorable frequency. In the matter of dishonest crime there is a marked difference between different parts of the district. Thayetmyo and the northern part of Myedè (Sinbaungwè) are comparatively quiet, but in the southern part of Myedè, especially in the interior round Thabala, cattle-theft is still rife, though it has decreased in the last few years. To some extent this is due to the ease with which stolen cattle can be driven to the Prome market, whereas there is no accessible market on the west of the river: but many cattle thefts are *pyan-pe* cases, in which money is extorted from the owner by a promise to return his cattle. This form of blackmail is most successful when a cultivator's bullocks are stolen at ploughing time. Dacoities are not now numerous

for many years after the annexation dacoits ravaged the north of the district, but by 1892 their bands were suppressed. Since then the erstwhile dacoit-infested neighbourhoods have become as peaceable as any in the district. As elsewhere, the hot weather is the crime season, and a succession of bad harvests has a marked though not immediate effect on the statistics. Thus a series of good agricultural years from 1897-98 to 1900-01 are represented by four years, 1899 to 1902, in which cattle-theft convictions averaged 31 a year. In the last of these years there were only 17 convictions. The number rose abruptly to 72 in 1903, the season 1901-02 having been a poor one. In the period 1901-02 to 1905-06 there were three bad and two moderate harvests, and in the corresponding crime period of 1903 to 1907 cattle-thefts averaged 76 yearly.

olice. The local authority for police administration is the District Superintendent, who is assisted by a Deputy Superintendent at headquarters and a Subdivisional Police Officer at Allanmyo. The Civil police-force is organised on the usual lines. The annexation of Lower Burma made a great increase of establishment necessary, but reductions were made after the restoration of peace. It was found in 1907 that still further reductions might safely be made to balance the great need for increased establishments in Lower Burma. This redistribution scheme entailed the reduction of the Thayetmyo force by about eighty men, and several outposts were abolished. There are detachments of military police still posted in the district. Fuller particulars of the police-force and of stations and outposts are given in the B Volume of the Gazetteer.

ails. The only jail in the district is the Thayetmyo Central Jail. All convicted prisoners are confined in this jail, which is a large and important one, receiving not only all prisoners from the district but also long-term prisoners from other districts, Magwe, Prome, Henzada, and Myanaung.

The District Jail as it was until Thayetmyo became the seat of a Central Jail was a substantial erection, built in the year 1869 and containing accommodation for 384 prisoners. Long-term prisoners were sent to Rangoon as it was felt to be dangerous to confine many of the worst type of criminals so near the frontier. In spite of this there was soon some overcrowding. When the jail was raised to the status of a Central Jail, it was considerably enlarged. It is now capable of containing nearly twelve hundred prisoners. The buildings are well constructed and sanitary, and the health of the prisoners is most carefully looked after, especial attention

being paid to water-supply ; water is pumped from the river close to the court-house and conveyed in pipes to the jail where it is filtered and boiled. Convicts sentenced to rigorous imprisonment are given employment outside the walls at the pumping station and in the fields attached to the jail, and within doors they are set to carpentry, smith's work, bamboo and cane-work, paddy-husking and wheat-grinding, oil pressing, tanning and curing, coir pounding, mat and rope-making and stone-breaking.

The average daily population of prisoners during the decade 1898 to 1907 was 860 ; of this number less than one in a hundred were women. Both the cost and the earnings per prisoner are liable to great fluctuations, but there is perhaps a tendency for the cost to increase slightly. The average yearly gross cost per prisoner in the decade already referred to was nearly Rs. 55, against which must be set the average earnings, amounting to Rs. 8-5-0 per prisoner.

PUBLIC WORKS

Public Works Department.

The district is combined with those of Minbu and Magwe to form a division of the Chindwin Circle, in the charge of an Executive Engineer, who has his headquarters at Thayetmyo. Few public works of any magnitude have been carried out in the district. Metalled roads 91 miles in length and 20½ miles of unmetalled roads are maintained by the department out of provincial funds. The department also constructed the unmetalled frontier roads which date from the days of the dacoits, but these roads were transferred to the control of the Deputy Commissioner in 1906 and they are now a charge on the District Fund. Four small irrigation works near Minhla were carried out as relief works for the benefit of surrendered dacoits in 1887, but these were transferred to the District Fund at the same time as the roads. Apart from the repair of its metalled roads, the functions of the department in this district are confined to the maintenance of its own bungalows on the roads and of court-houses, official residences, and the like.

District Fund.

The District Fund derived its income mainly from the cess of 10 per cent. on land revenue, from the leases of ferries and from the earnings of its bazaars, etc., until 1906, when heavy expenses were thrown upon it by the transfer of various works from the Public Works Department. In that year and the following, the fund received a large contribution from provincial funds.* This change

* Owing to financial stress, the provincial allotment of Rs. 45,000 was withdrawn in 1908 and 1909 and many useful works therefore remain in abeyance.

involved the entertainment of a District Fund Overseer in addition to other expenses. The principal objects to which expenditure from the fund is now directed are: construction and repair of roads with a certain amount of arboriculture, construction of small irrigation works, maintenance of district bungalows, bazaars, slaughter-houses and cattle-pounds, medical and sanitary objects, and education. A postal service between Mindôn and Myothit was maintained till 1906.

The average expenditure of the fund since the change referred to has been Rs. 66,000 annually; during the previous decade the average annual expenditure was Rs. 28,000. In 1871-72 the income of the fund was a little over Rs. 5,000.

CHAPTER X.

REVENUE ADMINISTRATION.

Bur-ese nes.

The revenues collected from Pegu before the annexation of that province by the British were derived from a land tax, transit dues, judicial fees and a few other sources. The land tax was based originally on the old Burmese idea of sovereignty, the people voluntarily surrendering to the King one-tenth of their produce in consideration of his undertaking the government of the country. As Colonel Browne points out,* this idea is fundamentally opposed to the notion prevalent in Peninsular India, where the supreme ruler is looked on as the supreme landlord. This land tax, however, was raised on rough and ill-defined principles, and there was no regular system of assessment.

The amount of revenue transmitted from the southern part of the present district to the capital was ordinarily about Rs. 50,000, but in the year prior to the annexation it rose to a little over a lakh. It would be hopeless to attempt any comparison between these figures and those recorded since the annexation, because the revenue so transmitted did not return, as it does under British rule,

* Pages 74 and 75 of his "Statistical and historical account."

in the form of pay of officers and establishment and other costs of administration; the tribute sent to the capital was but a fraction of that exacted from the people by the happily named "township-eaters" (*myosas*). Under British rule the district has been one of those districts in which the cost of administration tends to exceed the revenue. Thus the immediate rise in the revenue figures after annexation coincided with a relaxation and not an increase of taxation.

Land Revenu

Under British rule the principal source of revenue has been the land revenue, which includes land taxes proper, capitation-tax, *thathameda*, fisheries revenue and certain miscellaneous heads.

Land Revenu proper.

The land revenue proper has always been assessed at fixed rates, though these have from time to time been readjusted. The system which was introduced immediately on annexation and which was adhered to for nearly fifty years up to the time of the settlement of 1900-01 was the system of assessing revenue at fixed rates on the area actually cultivated in each year, uncultivated land being left unassessed. Of course, this entailed a fresh survey every year as there could be no permanence in holdings when abandoned fields were looked on as non-existent. A horde of native land-measurers from Arakan and Tenasserim poured into the new province and the tax demand was based on the figures which they supplied. As all measurements had to be made in the two months that followed the harvest, it is only natural that they were of the poorest description and the checks that could be placed on them very slight. To encourage the surveyors to bring all cultivated land under assessment, they were paid at the rate of one anna per acre. Thus the larger the area shown, the larger their pay; and it would have been asking too much of human nature to expect that holdings would not always be assessed for a higher area than they really contained. The rates were very low and this over-estimate of area was at first no hardship; but when surveyors took to showing regular extensions of cultivation where none had occurred, an element of uncertainty was introduced which naturally alarmed the cultivator.

Settlement 1860.

The cultivators were therefore ready to accept a rule-of-thumb settlement which was offered to them about 1860. The staff of land-measurers was to be withdrawn and the same amount of tax was to be paid every year for five years as had been paid in the year before settlement. Two such quinquennial settlements were made, after which

the system of annual survey was reintroduced, with a more competent establishment. The misguided system of payment by results was also reintroduced but was after a time abolished, all surveyors being paid fixed salaries.

The history of the rates at which land tax was assessed in the district cannot be clearly traced. The rates which were fixed by Sir Arthur Phayre immediately after the annexation in 1854 were very low: the tax on paddy land ranged from four annas to one rupee per acre, more than half being assessed at eight annas per acre. These rates were in force till 1873, when Colonel Browne recommended an enhancement; this appears to have ensued within a few years. Mr. Wallace, who conducted the Settlement operations in 1900, suspected, but was unable to find records of another revision later than the one effected on Colonel Browne's recommendation. The rates which were found in force in 1900 varied from twelve annas to Rs. 1-8-0 per acre. More than half the land cultivated was assessed at a one-rupee rate.

egular ettle- ent, 900-01.

Regular settlement operations were carried out in 1900-01, over the southern part of the district, covering nearly all the cultivated land in that part, the large areas left unsurveyed consisting almost entirely of jungle in which no cultivation but that of *taungya* is carried on. It was held that the low rates previously in force might be considerably raised without inflicting any hardship; the following passage from the Lieutenant-Governor's resolution on the Settlement report may be quoted:—"The average incidence of the present revenue per acre is Rs. 1-13-0, so that, notwithstanding that Thayetmyo is by no means a rich district and that holdings are small, some increase of revenue may fairly be taken." The basis accepted in drawing up the revised rates at which land was to be assessed was a one-twelfth share of the net produce. This is a low standard, the proportion varying from one-tenth to one-sixth in other parts of Lower Burma. Working on this basis a set of rates varying from eight annas to Rs. 2-8-0 for paddy land was drawn up. The parts of the district which was then under settlement was divided into eight tracts, in each of which again the fields were divided into three soil classes. In the most fertile tract (near Kama and along the lower reaches of the Matôn stream) the rates for the three classes of soil were Rs. 2-8-0, Rs. 1-12-0 and Re. 1 per acre. The least fertile tract is the south-west corner of Myedè (Nyaungbinzeik), and here the three rates fixed were Rs. 1-8-0, fourteen annas and eight annas. This careful

differentiation between tracts of different fecundity prevented any real hardship being inflicted by the increase of the revenue demand. Thus in Nyaungbinzeik region the revenue was actually diminished by almost a quarter, and in two other tracts (in the Thayetmyo and Mindôn townships) was hardly perceptibly increased; on the other hand, prosperous regions where paddy land may produce thirty to forty baskets an acre had their revenue increased by fifty to sixty per cent. The net result of the revision of rates was an estimated increase of 29 per cent. in revenue.*

Paddy land is always assessed to revenue, but if it is not cultivated an automatic fallow rate of two annas is charged. *Ya* land is not taxed unless a matured crop is obtained, *i.e.*, 25 per cent. or more of normal. The rates vary from Rs. 1-8-0 to Rs. 2 near towns and from Re. 1 to Rs. 1-8-0 elsewhere. Land on which a *mayin* crop has been obtained is assessed at the ordinary paddy rate. *Kaing* crops have higher rates than others, onions paying Rs. 4, tobacco Rs. 2-8-0, and other crops Rs. 2. Gardens are not assessed at a high figure, the rate varying from Rs. 1-8-0 to Rs. 3. The few betel gardens near Allanmyo pay Rs. 10 an acre. These rates are now in force and the intention is to retain them till a new settlement is effected fifteen years after the first one, that is, in 1915.

Unsettled tracts.

When the next settlement takes place, its scope will no doubt be extended to include the northern portions of the district. At present all the land in what was the Upper Burma portion of the district is assessed at the same rates, which are on the whole higher than elsewhere. Paddy land pays Rs. 2 or Rs. 3 an acre and other crops have various rates, ranging from Rs. 1-4-0 on sessamum or cotton and Rs. 2 on groundnuts to Rs. 7 on onions. The rates in force in unsettled tracts in the Lower Burma part of the district are very low, ranging from eight annas to Rs. 1-8-0, but no locality of any degree of fertility was left out of the settlement.

Cadas[tral] survey

A Government of India survey party carried out a cadastral survey in Kama and Thayetmyo townships and the southern part of Myedè in 1891-92. Before the settlement, the area was extended by a field-to-field survey done

* The new settlement was authorized in 1902. The increase for the *whole district* in land revenue proper in the year 1902-03 over the year before was nominally over Rs. 19,000. The estimated increase for the settled area was about Rs. 17,500. The large increase in land revenue shown in the B Volume tables for the year 1901-02 was due to the introduction of land revenue in the north of the district.

by local agency in Mindôn township in 1896-97. A Government of India party was again at work in 1907-08, bringing under survey Northern Myedè (Sinbaungwè) together with a strip of land near the river bank in Minhla township, comprising 35 *kwins*; but the *kwin* maps are not yet in use.

pit-
on-tax.

This tax, which had no precedent in the administration of the native rulers of Burma, was introduced to the lower portion of the district at the time of the annexation in 1854. The rate then fixed throughout British Burma was Rs. 5 for a married man, Rs. 3 for widowers and Rs. 2 for bachelors. This was later changed to a tax not exceeding Rs. 5 for the married and Rs. 2-8-0 for widowers or bachelors.

The poverty of Thayetmyo led to a modification of these rates in 1867, when a capitation-tax of Rs. 3 for married men and Rs. 1-8-0 for widowers or bachelors was put in force in the following tracts: Mindôn, Mindat, Myedè, Thayetmyo West, Kama North, Myohla and Sindôk; while in regions where the inhabitants depended on *taungya*-cutting the tax was only Rs. 2 for married and Re. 1 for single men. In 1896 some circles in Myedè, Mindôn and Thayetmyo were again subjected to the full tax of Rs. 5 or Rs. 2-8-0, the lower rates being retained in the remaining circles. The order has now gone forth that all parts of the district are to be levelled up to the full Rs. 5 rate. From 1907 to 1909 ninety named villages in Myedè paid at the Rs. 3 rate, while twenty-two paid at Rs. 4 for married men and Rs. 2 for unmarried, thirty-eight villages in Mindôn and nineteen in Thayetmyo township also paying the Rs. 4 rate; everywhere else the full rate was assessed after 1907. After the 1st April of 1909 all villages are to pay the full rate without exception. The only year in which free remission of this tax prevailed was 1906-07, when tax to the amount of nearly twelve thousand rupees was remitted. Often, however, really distressed villagers in the interior find it as expensive to make an application for remission, entailing as it does a journey to headquarters, as to pay the tax; and so the usual small extent of remissions is not a real gauge of the amount of distress in any year.

*itha-
la.*

Between the dates of the annexation of Pegu and the last Burmese war, the native rulers had developed the system of *thathameda* tax in Upper Burma; this system was taken over and continued by the British administration. Thus when those parts of the district which lie north of the frontier line (Minhla and Sinbaungwè) were added to the district in 1887, they continued to be, for purposes of

Revenue administration, part of Upper Burma The *thathameda* tax of Upper Burma is a substitute for both land revenue and capitation-tax, and up till 1900-01 no land revenue was assessed in these northern townships except on State land, where a light rate was imposed (paddy being assessed at eight annas per acre). In the year mentioned it was decided to extend the land revenue system to *bobabaing* or non-State land, the *thathameda* tax being simultaneously diminished from the old ten-rupee rate to five rupees a household. Thus we find that in the year 1901-02 the proceeds of the *thathameda* were almost halved, though the regular increase in the number of households assessed was maintained; while the land revenue collected in the district that year increased by some Rs. 70,000. The decrease in *thathameda* was slightly less than this, giving a small aggregate increase of revenue, and the experiment of introducing land revenue having thus been proved successful, the new system was definitely adopted: at the same time capitation-tax at the full rate of Rs. 5 for married men and Rs. 2-8-0 for single men was substituted for the already decreased *thathameda*. The abolition of *thathameda* and the introduction of a uniform system for the whole district was of course a measure of administrative convenience: but is open to the objection that traders are not now as heavily taxed as agriculturists.

Fisheri[es]

There are very few leased fisheries in the district and income from this source has never reached Rs. 2,000. The leases are sold by auction. In the year 1907-08 the leased fisheries failed owing to the fact that the river did not rise and lease-holders were granted remission of three-quarters of the auction prices. There is a steady income of three to four thousand rupees from net licenses.

Miscellaneous land revenue

This head includes receipts under the Village Act (fines), survey fees for pottas, royalties and fees on minerals, and other sources. During the years 1901 to 1908 the average yearly revenue from the first of these sources was Rs. 6,300, from the second Rs. 480, and from minerals Rs. 5,500. The revenue from minerals is derived partly from fees on prospecting licenses and partly from duties on clay and limestone extraction. These receipts have dwindled considerably since 1905.

Genera[l] review.

Reviewing land revenue as a whole, it is found that the collections at present are over a lakh in excess of those obtained fifteen years ago. The total land revenue collections for the year 1895-96 sank as low as three lakhs and twelve thousand odd rupees; after this a steady rise set in

both in land tax proper and in *thathameda*, till in the year 1900-01 four lakhs fifteen thousand were collected; the next two years saw large increases, due to revenue changes already explained. The total reached four and three-quarter lakhs in 1903-04, since which time no considerable change has to be recorded. Comparing the figures for the southern townships in 1901-02 with those given for the old district just thirty years before by Colonel Browne, we find that capitation-tax receipts had increased by about forty thousand rupees; but allowance must be made for the fact that parts of the southern townships on which the calculation is based were not included in the old district. Taking this into account, we may conjecture that the amount of the increase was about twenty-five thousand rupees, or 25 per cent. of the former figures. That the increase should be no larger is not remarkable, since neither population nor rates of tax have changed much in the interval. On the other hand, the introduction of efficient methods of land revenue assessment has led to a growth in land revenue over the same period of about eighty thousand rupees, an increase of over 100 per cent. over the earlier figure; while if the calculation is carried on a year to bring in the increase in revenue due to the settlement operations, the increase is found to be one of nearly 150 per cent.

THER URCES REV-UE. xcise.

The most important source of revenue, apart from those grouped under the head of Land Revenue, is the Excise administration. There are 27 shops licensed for the sale of liquor, while opium is sold by licensed vendors at Thayetmyo, Kama and Minhla. As elsewhere, opium vendors are appointed by the Commissioner at a fixed license fee, but the liquor licenses are sold to the highest bidder and are generally held by Chinamen. The liquors principally sold are toddy and *seinyè*. Illicit stills in which country spirit is manufactured are from time to time discovered. The proceeds under this head of revenue have almost doubled themselves since 1870, the most notable increase being after 1900; this is no doubt due to the improvement of the preventive service and the suppression of much illicit traffic, with a consequent improvement in the value of liquor licenses: it is in the prices offered for these licenses that the increase is most remarkable. Excise receipts supply one-sixth of the revenues of the district.

amps.

This is a regular source of revenue which has improved somewhat of late years but which is generally fairly steady. Owing to the absence of large estates and business concerns, there are few instruments of high value drawn up,

and the revenue from non-judicial stamps is not considerable. Similarly the judicial stamps sold are mostly of the lowest denominations, very few civil suits of any magnitude arising in this district.

Miscellaneous. As in the case of stamps, the absence of agricultural speculation means that few documents are registered, and registration fees are a small item in the district revenues.

In the case of income-tax, again, the poverty of the district prevents this being a fruitful tax. Since the exemption of small incomes from this tax the number of assessees has not risen far above a hundred.

TOTAL REVENUE. The total revenue from all sources is now about six lakhs; up till 1899 it was less than five lakhs, in 1872 it was less than three lakhs. The incidence per head of population has risen, in the period intervening between 1872 and the time of writing, from Rs. 1-12-0 to Rs. 2-6-0, that is to say, by ten annas. There is no doubt, however, that taxation is under modern arrangements more equitably distributed than at the earlier date.

CHAPTER XI.

LOCAL SELF-GOVERNMENT.

MUNICIPALITIES.—Thayetmyo; Allanmyo-Ywataung.

MUNICIPALITIES. There are two municipalities in the district, one at Thayetmyo and one at Allanmyo. In neither of these is the elective system in force, the non-official element being provided by Government nomination. The Municipality is the only form in which the privilege of self-Government has been extended to the people of Burma, since there are no district boards as in other provinces.

Thayetmyo. The Municipality of Thayetmyo was established under the Act of 1884 in the year 1887. For some years the townspeople were given the opportunity of electing members to the committee. No advantage was taken of the opportunity, except by the Hindu and Mahomedan community which was entitled to one representative: elections were duly announced but not a voter came forward from among the Burmese or Chinese population. Accordingly the elective system was abolished in 1892. The committee now contains eleven members. Three of these are *ex-officio* members, the Deputy Commissioner (who is always the President), the Civil Surgeon (who is always the Vice-President), and the Executive Engineer. The remaining members are nominated by the Commissioner as vacancies arise.

Though the attitude of the townspeople towards election proved so unpromising, the non-official members have not failed to show a proper interest in their duties. Resignations are not common and several of the members have sat on the Committee for twenty years. Moreover, the regularity of attendance at meetings has throughout been commended in the annual reports. The average percentage of attendance at each meeting over a long period of years works out at about 66. The non-official members are recruited principally from the traders of the town.

The main sources of revenue are the house, the tolls and cart taxes, a lighting tax and bazaar rents. The latter item usually provides at least a third of the income of the Municipality. The incidence of taxation was for a long period low. In 1903-04 it amounted to Re. 0-12-6 per head, while in the same year the average incidence for all Municipalities outside Rangoon amounted to Rs. 1-10-3 per head. Since that time, however, considerable improvements in sanitation, roads and lighting have almost doubled the incidence. The lighting tax was not introduced till 1904. In spite of this increase of taxation it was found necessary in 1906 to take a loan of Rs. 20,000. The proportion of rate-payers to population is about one in seven. The main sources of expenditure are the Hospital and the Conservancy work. Other heads are lighting, roads and education; a Municipal school is maintained in which Anglo-Vernacular instruction is given. Before 1905 the figures for income and expenditure were for many years almost stationary, the only unusual year being 1903-04, when new hospital buildings were erected at the cost of Rs. 22,000, the old hospital having been burnt down in 1900. The new hospital was opened on April 1st, 1904.

Despite the large area which it embraces, the Allanmyo-Ywataung Municipality is as yet of less importance than that of Thayetmyo; but the town is rapidly growing and its population will soon surpass that of Thayetmyo. The Municipality was established as recently as 1900; until that time local affairs were for many years managed by a Town Committee. Even after the Municipality was formed it depended at first for its revenue principally on the rents of bazaar stalls, no taxes of any sort being levied. In 1903 cart tax and toll were introduced, and in 1906 a house tax was imposed for the first time. At present the incidence of taxation is about Rs. 1-6-0 a head. The Committee has twelve members. The Subdivisional Officer (President), the Township Officer (Vice-President), the Overseer, P.W.D., Allanmyo, and the Sub-Assistant Surgeon in charge of the Municipal Hospital, Allanmyo, are *ex-officio* members;

the remaining eight members are nominated by the Commissioner. The work of the Municipality has hitherto been in the direction of providing roads and of sanitation, and a new hospital is shortly to be erected at a sanctioned cost of Rs. 18,000.

Particulars in regard to the District Fund have been given in Chapter IX dealing with General Administration. Distric[t] Fund.

CHAPTER XII.

EDUCATION.

Literacy; Government system; Anglo-Vernacular schools; High schools; Secondary schools; Primary schools; 500-rupee schools; Female education.

The *pôngyi-kyaung* system, which was found in the country when it was taken over by the British Government, has formed the basis for later work in the direction of improving the quality of education. As far as extension goes, the native *kyaung* is so well established an institution that they are exceptional Burmans who have failed to acquire some rudiments of education. Consequently, we find that at the census of 1901 the proportion of literates to the total male population was 487 per thousand. Females have not access to the village monastic schools, and only thirty-eight in a thousand were literate. Literac[y]

The history of education in the district is not easy to trace, as for many years Thayetmyo was not a separate charge but was under the supervision of the Deputy Inspector of Schools, Prome. Under this authority the process of grafting Western culture on the indigenous *pôngyi-kyaung* system was gradually developed, till Thayetmyo became educationally important enough to be made a separate charge. This took place in 1896, a year after the introduction of itinerant teachers. The difficulty which the Deputy Inspector at first found in registering schools, owing to the suspicions of the monks, was gradually overcome, and now the district of Thayetmyo, though not superior to many districts in Lower Burma, ranks much higher than the majority of Upper Burma districts. There are six itinerant teachers in five townships. Again, in 1896 there were 102 schools, with an attendance of 2,442 pupils; in 1901 there were 103 schools, with an attendance of 3,434; and in 1907 there were 147 schools, with 3,904 pupils. Government system.

There are three Anglo-Vernacular schools; of these the Municipal school at Thayetmyo is the largest, and it is graded up to Standard VII; the other two are the Municipal Anglo-Vernac[ular] schools

school at Allanmyo and the American Baptist Mission school for the Chins at Thayetmyo.

gh ools.

There is only one high school in the district. This is U Wilatha's school at Allanmyo, which draws a fixed quarterly grant.

:on- Fry ools.

There are thirteen secondary schools. One of these is Maung Min Daing's school at Thayetmyo. This was founded in 1887 as a primary school and developed into the secondary grade in the year 1892. It draws a fixed grant and is in a prosperous condition, having an attendance of 98 boys and 57 girls. This is a typical vernacular school. Another important school is U Ardeissa's at Mindôn which was founded in 1886. This school was singled out for commendation in the Third Quinquennial Report on Public Instruction in Burma. The following schools also deserve mention:—Maung Kan Taung's school, Minhla; Maung Lu Gale's school, Allanmyo; U Pandi's school, Sinbaungwè; Maung Hmat's school, Kama; U Pandi's school, Taungnatha.

mary ools.

There are 133 primary schools, of which thirteen are graded up to Standard IV. The annual report of 1908 shows an attendance of 2,953 pupils.

- ee ools.

Since 1905 Government has built schools at a cost of Rs. 500 each in backward places in order to foster education. Till the schools have become popular enough to support themselves out of fees, a temporary salary is paid to the manager. The district contains six of these schools. They were built at Pyalo, Nyaungbintha, Zaunggyandaung, Mindè, Singaw and Letpantaga. Of these the first two are doing well. The schools at Singaw and Zaunggyandaung are abandoned.

male uc- on.

As is usual in Burma, female education has been much neglected, but there are now four public schools for girls. The most important is Ma Tha Kaung's school at Sinbaungwè, which is graded up to Standard VII. The others are primary schools.

CHAPTER XIII.

PUBLIC HEALTH.

GENERAL HEALTH.—Malaria; Cholera; Plague; Smallpox; Ophthalmia. VITAL STATISTICS. SANITATION. HOSPITALS.

INERAL ALTH.

Thayetmyo is on the whole a healthy district. This is largely due to the comparative dryness of the atmosphere and the gravelly nature of the soil on which many of the villages stand. Again the population is so scattered in most

parts that the spread of infection is easily and naturally checked.

Malarial fever is almost endemic in the upper reaches of the Matôn valley, especially about Mindôn. It is especially prevalent when the rains break, rapid alternations of heat and cold upsetting the system so that the disease finds an easy prey. The peculiar virulence of the scourge at Mindôn itself is partly attributed to the existence about the town of several tanks of stagnant water, thick with green scum, for these tanks no doubt breed mosquitoes in profusion. Religious scruples against the filling in of these tanks have not as yet been overcome. In the north-west the post of Myothit was found very feverish when it was occupied by native troops in the time of the dacoities, but jungle-clearing improved matters slightly. Lower down in the district malaria is not so prevalent. At Thayetmyo the sanitary zeal of medical officers has not effected the discovery of more than occasional specimens of the anopheles mosquito. Malar

Cholera is a recurring epidemic on the river bank, more especially at Kama. It comes up from Prome and Henzada and spreads, owing to the carelessness which the villagers show in the matter of water-supply. It is only occasionally that cholera lays hold seriously of the riverine population at Thayetmyo or to the north. Choler

Plague has never established itself in this district*; but the arrival of contacts from Prome and other infected towns at Kama or Thayetmyo is a constant source of anxiety. Plague

Smallpox occasionally decimates a village, but it is not at all common, the number of deaths from this cause having always been less than one in a thousand of the population in any year. Vaccination is compulsory in Thayetmyo town, and elsewhere is fairly popular. Successful operations rose between 1890 and 1900 from 4,786 to 21,648, though the number has declined somewhat since then. Smallpox.

Ophthalmia is prevalent in the district, the number of victims met with being to a newcomer quite striking. This is attributed to dirty habits among some of the villagers, and to the same cause are due the skin diseases which are unduly common. In much of the district water is scarce during part of the year and consequently the Burman foregoes his usual cleanly habits. Ophthamia.

A record of deaths and births is kept, the contribution of the materials for this being a duty of the village headmen. VITAL STATISTICS.

* Since the time of writing the above, this immunity has unhappily been lost. Kama became infected in September 1909, and a serious outbreak in Thayetmyo commenced in December 1909.

The lack of any medical knowledge among those on whom the task of reporting the facts is imposed renders the statistics almost valueless in so far as they deal with the cause of deaths, "fever" being given as the cause in an overwhelming number of cases. But the statistics are fairly reliable as regards the actual number of births and deaths. The birth-rate has of late years nearly always greatly exceeded the death rate; in 1907-08—not an exceptional year—there were 8,490 births to 2,480 deaths. There is no commensurate increase of population, the natural surplus being drawn off by emigration to Lower Burma.

IT- ON.

In the towns conservancy operations have done much to ensure the health of the communities. This work is done by the Municipalities in Thayetmyo and Allanmyo, while in the smaller towns and villages, such as Minhla, Sinbaungwè, Pyalo, Nyaungbinzeik and Kama, it is done so far as means allow by the District Fund. There is much work to be done yet in inducing jungle people to bring their villages into even the most primitive state of sanitation.

SP- LS.

There are four hospitals in the district, the two largest of which are maintained by the Municipalities of Allanmyo and Thayetmyo. The Thayetmyo hospital is the principal hospital in the district; it is in the charge of a Civil Surgeon, whereas the other three hospitals are in the charge of Sub-Assistant Surgeons. There is accommodation for 35 in-patients, though the average daily number is less than twenty. The average daily attendance of outdoor patients is between 70 and 80. The Allanmyo hospital is old and badly equipped, but a new hospital is shortly to be erected. At present there is accommodation for 21 indoor patients. The other two hospitals are at Mindôn and Minhla. These are smaller institutions and are maintained by the District Fund.

CHAPTER XIV.

MINOR ARTICLES.

THAYETMYO TOWNSHIP.—Thayetmyo; History; Present condition; Cantonment. MINDÔN TOWNSHIP.—Mindôn. KAMA TOWNSHIP.—Kama; MINHLA TOWNSHIP.—Minhla. MYEDÈ.—Allanmyo; Sinbaungwè; Kyauksaungsan; Pyalo.

AYET- O WN- IP.

Thayetmyo Township.—This township, which has its headquarters at Thayetmyo, is the least of the five townships in the district, alike in area and in non-urban population. It contains 192 square miles. Its boundary on the east is the Irrawaddy:

the boundary leaves the river at a point ten miles south of Thayetmyo and runs due west for ten miles, the township of Kama lying to the south, till it reaches the Matôn stream; here it turns to the north, having Mindôn township on the west, to a point 27 miles distant, whence it turns almost due east and runs with the boundary of Minhla township till the Irrawaddy is again reached 17 miles north of Thayetmyo. The township corresponds fairly closely with the old Burmese *myothugyi*ship of Thayetmyo, the northern part of which was cut off by the frontier in 1854; this part was known in the following period as "Thayetkyan," or "Thayet's remainder"; after the annexation of Upper Burma, however, an extension northward was again made. The township consists almost entirely of hilly jungle, but there are patches of fertile soil by the Irrawaddy and also on the course of the Pani stream, which cuts across the south-west corner. The only place of importance in the township is the town of Thayetmyo itself; there are 106 villages, but none are very large. The rural population declined between 1891 and 1901.

Thaye[tmyo]: Histo[ry]

According to Burmese annals, the town of Thayetmyo was founded in 1306 A.D. by Minshin-saw, son of the last king of Pagan, after the overthrow of the Pagan dynasty by invading Tartars. It was a son of the founder who was carried off into captivity to Arakan and who later, when he became king at Ava, commemorated his escape by erecting the Shwe-thet-hlut pagoda at Thayetmyo, his birth-place.

The name Thayetmyo (which means "mango town") is said to be corruption of an earlier form, That-yet-myo, or "city of dreadful slaughter." This name is accounted for by a legend concerning an early monarch. Fearing that he would be overthrown by one of his own children, he killed every son that was born to him. The queen managed to save one boy by introducing a female changeling, and this prince grew up to be a welcome support to his father in his declining years. After routing the old king's enemies he entered Thayetmyo but despite the prophecy did no injury to the king. The spot where he halted outside the town, six miles out, is still known as Mindè or "prince's tent." The town of Thayetmyo is now commonly called Tawgyaung by the Burmans, that being the name of a village which formerly stood on the site of the cantonment.

Under Burmese rule Thayetmyo was the seat of a *myothugyi*. A full account of the revenue assessments and other features of the Burmese administration is given in

Colonel Browne's work, page 99, and need not be here repeated.

sent lition. Thayetmyo had a population of 15,824 at the census of 1901. It is the headquarters of the district, containing all the principal civil offices, the jail and the largest hospital. There is a circuit-house for the use of Government Officers as well as a small travellers' rest-house. No civil station has been formed here, but there are Government bungalows for the Deputy Commissioner, the Civil Surgeon, the Executive Engineer and the Forest Officer. Other officers have to find house-room in such of the bungalows in or near cantonments as are not occupied by regimental officers. These privately owned bungalows are nearly all in a dilapidated condition, not unnaturally, since the constantly threatened removal of the regiment does not make house-owning an attractive investment in Thayetmyo.

The town itself is somewhat compactly built: in the centre there are a number of "pukka" buildings, set close on the road and without compounds. This part of the town is by no means characteristically Burmese in appearance; it is largely occupied by natives of India, who have been drawn hither as camp-followers of the troops and who now hold much of the local trade in their hands. The town only contained two or three hundred houses in Burmese times, and its rise was solely due to the establishment of the cantonment; it has now become the principal trade centre of the district, and though there was a decrease in population of over a thousand in the interval between the census of 1891 and that of 1901, this decrease occurred in the cantonment only, being due to the removal of troops, a process which has been repeated since 1901. The affairs of the town are under the control of a municipality, which keeps the streets repaired and lighted, carries on conservancy work and maintains a slaughter-house and a large bazaar.

ton- nt. The cantonment of Thayetmyo is about $1\frac{1}{2}$ miles square. It is situated on undulating ground just north of the town, and its large trees and open spaces give it a pleasing and park-like appearance. It was established in 1854, and till the annexation of Upper Burma, Thayetmyo was an important frontier station. Even then, however, its situation was considered by some to be ill-chosen, both for climatic and military reasons; since the annexation it has always been believed that the abandonment of the station is merely a question of time. Hitherto the station has been saved from entire abandonment by the excellence of the soldiers'

barracks and by the fact that there is an important military prison in the fort; but there is at present only a part of a European regiment here, while not long ago the garrison contained a British and a native regiment as well as a battery of artillery. In the case of outbreaks of cholera, troops exposed to infection are segregated in a salubrious and pleasantly situated camp on the hills behind the town.

MINDÔN TOWNSHIP.

Mindôn Township.—This lies in the west of the district, being bounded on the south by Kama township. From the point on the Matôn stream where Thayetmyo township leaves Kama (see above) the boundary of Mindôn follows the Matôn stream westward for five miles, after which it runs along the ridge between the Shu and the Made valleys for twenty miles in a direction slightly south of west till it strikes the main Yoma ridge at the Sanwin-taung. It now follows the district boundary northward to a point nine miles short of the north-west corner of the district, whence it proceeds eastward for about thirty miles, with Minhla township to the north; here a southward turn is taken, a long ridge being followed back to the starting point, a distance of thirty miles, along the last twenty-seven of which Thayetmyo township lies over the border. The township contains an area of 708 square miles, but most of this is too wild and mountainous to support human life. The cultivated area is not much more than one-twentieth of the total area. At Mindôn there are valuable onion and tobacco crops, but elsewhere *taungya* cultivation prevails. This shifting form of cultivation is well suited to the habits of the Chin element of the population. The Chins live on the slopes of the Yoma and number altogether about 4,000, or some 12 per cent. of the total population. The township has 251 villages, none of which are of any size except Mindôn, with its suburb Ôkpo.

Mindôn

Mindôn is a picturesque town on a bend of the Matôn stream in the centre of the township. It was founded about 100 A.D. by Thamôndarit, a fugitive prince from Prome, who called it Bunmawadi. The modern name is said to be a corruption of Min-pôn, "prince's hiding place," this having been the refuge of certain rebel princes from Thatôn. In Burmese times Mindôn was the seat of a *wun*. The last *Myosa* was afterwards king of Burma, and it was from this town that he derived his title of "Mindôn-min." The place has declined in later years, and in 1901 had a population of 803 only, hardly more than half the number recorded in 1873. The community is an agricultural one and, like the rest of the township, has lost in numbers owing to emigration to the delta.

The headquarters of the township are at Mindôn. There is also a small hospital, with an average daily attendance of six indoor patients. A bazaar erected at the charge of the District Fund was completed in 1906, but as there are no walls and goods cannot be locked up at night it is never used.

AMA OWN- IIP.

Kama Township.—This is the most southerly township in the Thayetmyo subdivision. On the east it is bounded by the river Irrawaddy and on the south by the Prome district; the township boundary runs northward with the district boundary along the Yoma ridge for seven miles, after which it turns to the east and cuts right across the subdivision to rejoin the Irrawaddy, Mindôn and Thayetmyo townships lying on the north. The area of the township is 575 square miles, of which considerably less than one-tenth is cultivated. The most fertile tract is the broad valley of the Matôn stream, containing some of the most valuable paddy land in the district. The interior of the township is largely uninhabited jungle, reaching up to the Yoma range. Here, as at Mindôn, the population declined between 1891 and 1901.

ama.

The town of Kama, with a population of 1,779, is of some importance as a trade centre owing to its position near the point where the Matôn stream debouches. Of recent years, however, the formation of a sandbank in front of Kama has caused the trade to dwindle, goods that were before handled at Kama being now carried straight on to Prome. The town is a picturesque one, lying in a corner of the hills by the riverside: it contains a number of pagodas of some archæological interest, referred to in Chapter II. In addition to the Township Court, the town contains a bazaar.

The name of Kama is said to have been given to the place by the King Narapati-sethu (1167 A.D.). This king when re-consecrating the Pamabaw pagoda wished to offer a piece of fine cotton cloth. He was in fear that he could not procure a suitable gift, when a man from Thabyinsaung suddenly appeared and offered a fine piece of cloth; at this the king was greatly pleased and bade men call the town "Pyin-ta-kanma," signifying "the cloth provided by fortune." The name was shortened to Kanma, "fortune," and corrupted to Kama. Another legend says that the name, which has another and an unsavoury meaning, was given to the place in mockery by the king Alompra (Alaung-Paya).

INHLA WN- IP.

Minhla Township.—This is the second largest but the most barren township of the district. It has an area of 1,523 square miles, of which only about 26 square miles are now under cultivation. The population in 1901 was 42,120, but a

considerable decline, due to emigration, has probably occurred since then, for the area under cultivation in 1907-08 was less than half what it was in 1901. This is the effect of a series of bad seasons.

The boundaries of the township are, on the east, the Irrawaddy, on the south the northern boundaries of Mindôn and Thayetmyo townships, on the north the Minbu-Thayetmyo district boundary, and on the west nine miles of the Thayetmyo-Kyaukpyu boundary. The township is thus a wedge-shaped piece cut off the top of the Thayetmyo subdivision across its whole width from east to west. In the high hills to the west live about six thousand Chins. The township was Burmese territory till the war of 1885.

Minhl

The present town of Minhla, unlike Mindôn or Kama, is of no great age. Its foundation was in 1854, a year after the annexation of Lower Burma. The founder was an Armenian, Makertich, who before the war was a governor in Lower Burma: unable to endure the new rule, he withdrew with a number of discontented Burmans in his train and came to this place, where he erected a new town on an old abandoned site. He was appointed *Wun*, and the town rose to some importance.

A fort was erected by the Burmese on the river bank and was the scene of the only real engagement in the war of 1885. This fort is still standing and was for years used as a bazaar. It was not a suitable site, being too hot and airless, and in 1904 a new bazaar was erected just outside, the fort being let for purposes of storage. A hospital was erected at Minhla in 1887.

MYEI SUBDI ISION AND ALLA MYO TOWN SHIP.

The SUBDIVISION OF MYEDÈ, which is now co-terminous with the TOWNSHIP OF ALLANMYO,* consists of all that part of the district that lies to the east of the Irrawaddy. The area of the township, which now includes the former territory of Sinbaungwè, is 1,742 square miles, of which area about 110 square miles are under cultivation; in 1901 the population of the township, including towns, was 90,067.

The headquarters is at Allanmyo, which is on the left bank of the Irrawaddy, five miles above Thayetmyo, and a few miles below the site of Myedè, from which it is separated by the Kyini stream. Myedè was the most important town of the neighbourhood in Burmese times and could boast a considerable antiquity. The legend says that in the fifth century B.C. the queen of Tagaung (old Pagan) gave birth to twin sons who were blind: they were called Mahathanbawa and Sula-thanbawa. It was decreed that they

* *See* note on page 48.

should die, but their mother saved their lives and set them on a raft to float down the Irrawaddy after they had grown up. At Sagaing (Sitkaing) the raft caught in the branches of a *sit* tree, and a female demon, "biluma," came on board. She applied medicaments to their eyes at Sa-gu (which means "the cure begins"), with the result that at Salin the light of day began to dawn on them. When they finally landed with vision made perfect, their first exclamation on looking round was "Myedè, mo bôn" (the earth is in the midst and the sky is its cover). This occurrence was commemorated by the bestowal of the names Myedè and Mobôn on two villages which arose close to the spot where they landed. The village of Mobôn, a mile or two north of the old site of Myedè, is still in existence.

Myedè rose to eminence owing to the presence of a strong fort, established, it is said, by King Thamôndarit about 100 A.D. and rebuilt by a prince of Ava (Min-ye-kyaw-swa) thirteen centuries later. The fort was occupied by the British troops after the annexation of Lower Burma and the town cleared. The fort has long since been abandoned by the troops: the site of Myedè now stands deserted, except for a miserable hamlet called Shwegyaung, which marks the place where once a wealthy monastery stood. The retention of the name Myedè for the subdivision is due to the fact that in Burmese times a *Wun* had his seat here.

The townspeople of Myedè when removed from their old town established themselves in a village on the south of the Kyini stream: the village soon became a town and it was given the name Allanmyo in honour of Major Allan, the officer who demarcated the frontier. Allanmyo has now become almost continuous with Ywataung, a village two miles to the south, and the two places may be regarded as forming one town. After the removal of the troops the place declined in importance, the number of inhabitants of Allanmyo-Ywataung falling from 13,328 in 1872 to 9,012 in 1891. Since then, however, a new era of progress has set in; the enlargement and establishment of cotton-ginning and groundnut oil factories have brought in more workers and has improved the status of the port as a trade centre. Ywataung itself, owing to the formation of a sandbank before it, is on the down grade, and the people are moving up into Allanmyo: here, however, the growth has recently been rapid, and Allanmyo will probably surpass Thayetmyo in size ere long.

The Subdivisional Officer of Myedè and the Township Officer of Allanmyo have their courts here. A hospital,

shortly to be rebuilt, is maintained by the Municipality, which also owns a bazaar, cattle market and slaughter-house, performs conservancy operations and is busy with road-making and lighting. Just behind the town are a number of low hills, open to every breeze and commanding a charming view of the river and the wooded heights opposite, and perched on the summit of several of these hills are the quarters of officials and the district bungalow for travellers.

Sinbaungwè is a small town in the Myedè subdivision, 25 miles north of Allanmyo on the bank of the river. The population in 1901 was 2,394. When this northern part of the district was still independent Burmese territory, Sinbaungwè was the seat of a *Wun*, and under British administration it became a township headquarters. Work, however, was so light that the township was abolished in 1906; the region administered from Sinbaungwè though large was scantily populated, crime was and still is uncommon and civil litigation was so rare that shortly before the change there was not a single resident advocate. The Township Officer of Allanmyo now holds court for a few days at Sinbaungwè twice a month. There is a good bazaar and a slaughter-house. The town stands away from the main channel of the Irrawaddy, and in the dry weather a broad sandbank has to be crossed to reach the steamers.

Sin-baungw

Ten miles inland from Sinbaungwè is the village of Kyauksaungsan, which has thirteen hundred inhabitants. The village was founded in 1226 B.E. (1874) by settlers from Kyaukpadaung, near Mount Popa (Pagan). The present headman is the son of the man who led these first immigrants. The village is pleasantly situated on rising ground with a fine view to the west and south-east. The soil being gravelly and water being scanty in the neighbourhood, there is no paddy cultivation, the village depending on its *ya* crops. Experiments with groundnut were early made here. The village is now one of the most prosperous in the district. There are no wells and water is stored for the hot weather in a tank, to the construction of which the District Fund contributed Rs. 400 in 1904.

Kyauk-saungs

Pyalo, a village of over a thousand inhabitants, stands on the east bank of the Irrawaddy, 17 miles south of Allanmyo. It is a large agricultural village and a calling place for the ferry steamer from Prome. Pyalo has now outgrown the village of Nyaungbinzeik, a few miles to the south of it, though the latter was formerly of some importance, being the seat of a *Myo* in the time of the independent Burmese kingdom.

Pyalo.

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MAP OF THAYETMYO DISTRICT.

Scale $\frac{1}{1,000,000}$.



Specially prepared for the Deputy Commissioner.